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A
SUPPLEMENT
TO THE
PRACTICAL TREATISE
ON
THE CULTURE OF
FLORISTS' FLOWERS;
CONTAINING
Additional Directions
AND
IMPROVED MODES
OF CULTIVATING THE
AURICULA, POLYANTHUS, TULIP, RANUNCULUS,
HEARTSEASE, CARNATION, DAHLIA,
&c. &c.

With Catalogues
Of the newest and most esteemed Varieties of each Flower.

DEDICATED, BY PERMISSION,

TO THE QUEEN.

BY
THOMAS HOGG, FLORIST,
PADDINGTON, LONDON.

PUBLISHED AND SOLD BY THE AUTHOR.

M.DCCC.XXXIII.

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TO HER MOST GRACIOUS MAJESTY,
QUEEN ADELAIDE,

THE
PATRONESS

OF THE
METROPOLITAN FLORICULTURAL SOCIETY,

THIS SMALL SUPPLEMENT,

ON
THE CULTURE OF
FLORISTS' FLOWERS,

IS MOST HUMBLY INSCRIBED,

BY HER MAJESTY'S

MOST DUTIFUL,

AND

MOST GRATEFUL SERVANT,

THOMAS HOGG.

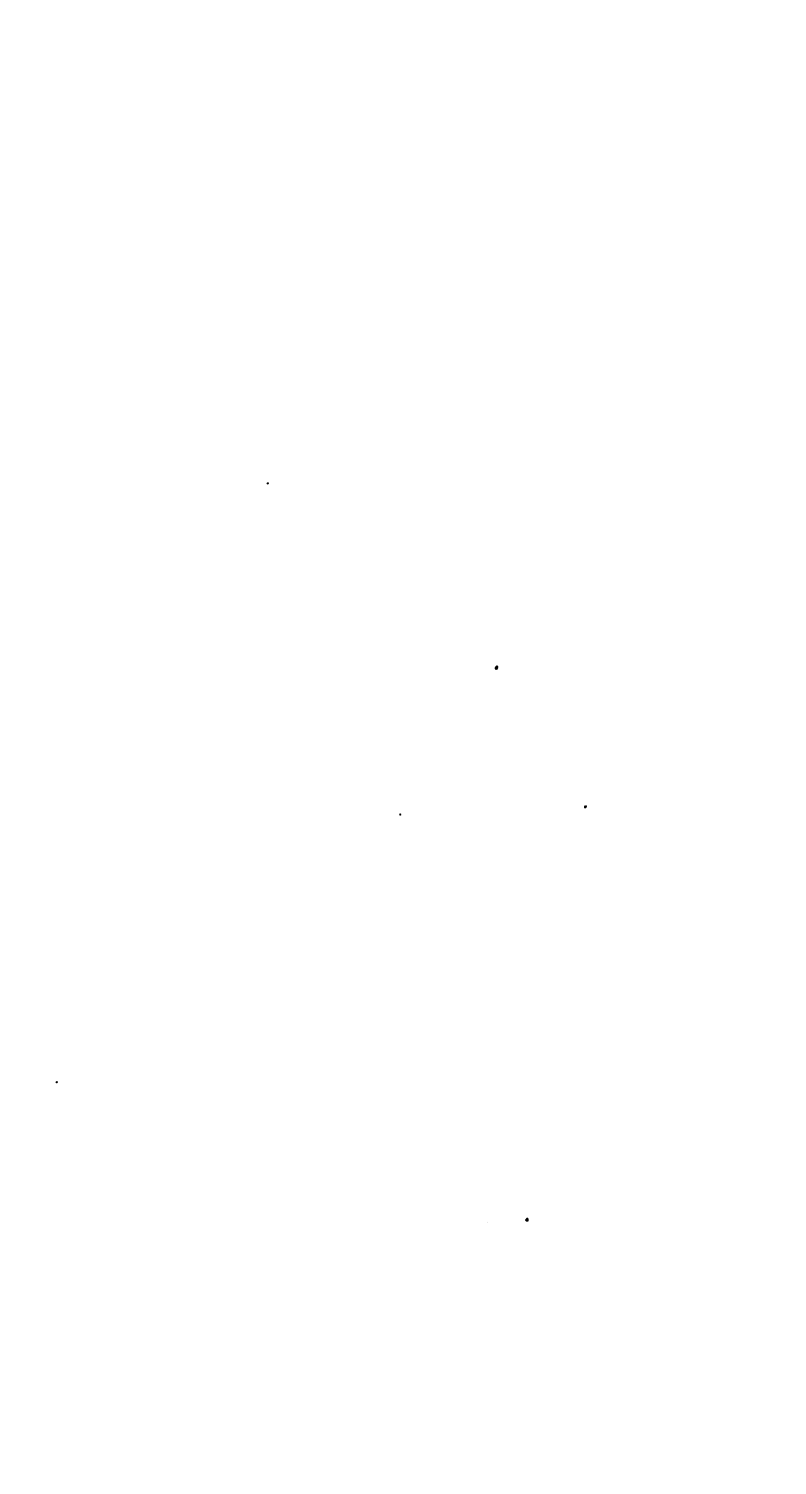


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P R E F A C E.

THIRTEEN years have elapsed since I first published my small Treatise on the culture of Florists' Flowers; the favorable reception which it met with, far exceeded my most sanguine expectations; and the several editions which it has passed through since, afford the gratifying proof, that it has not declined in public estimation; on the contrary, the demand for it, I am told, continues regular and constant; it is, I believe, now read, and consulted by all who have a taste for flowers, and who desire to excel in the culture of them.

It is some satisfaction to be able to say, that, after so many years additional practice and experience, I have nearly pursued the same mode of treatment which I recommended at first; I have, therefore, very little either to amend, or retract on this score; indeed, if I were required to note down every particular, as it occurred, of our present management of them the year round, I am not aware that there would be any very material difference; yet no doubt some omissions would be supplied, and some improvements recorded, which would add to the value of the book; it is with this view, that I have

been induced to give, by way of Supplement, whatever new has occurred in practice, and to shew wherein this practice differs from that of former years.

The article on Tulips will, it is hoped, be found particularly interesting and satisfactory to every cultivator of that flower, for the account is very full and detailed in every part of their management; and the method which our ablest florists now pursue in raising seedlings, is also minutely described; the pleasing result of which is already very apparent, and will be yearly more so: the varieties of the Tulip are not only greatly increased, but those varieties are also found to be perfectly new, and beautiful, and very distinct from the old ones. It was, indeed, high time to change the system, for the old breeders were worn out; they only produced the same things over and over again, with little or no variation; nobody ever thought of crossing the breed, either to vary, or to improve the species, though the surprizing effect of such practice was daily before their eyes; I speak as to fruits only, without referring to the change it had wrought in our domestic animals; the reason is, that though the sexual system, and the principle of impregnation, were well understood by Botanists, yet its effects on flowers had seldom been tried; and when so tried, it had invariably been done by some experimental Botanist, without any ulterior object in view; thus, as far as regards florists, it had scarcely been thought of, much less practised by them.

With regard to giving the standard height of Tulips, and pointing out the precise place they ought to occupy

in the bed, I wish some one more competent than myself, and more observant of these matters, had undertaken the task ; such a Table has been long wanted ; but, as this has been very recently done in a very satisfactory manner, both by Mr. Brown, and Mr. Groom, in their new Catalogues, it will be unnecessary for me to proceed further with it ; particularly, as I do not now intend to insert a general Catalogue of Tulips, but to give the names of such only as are deemed most worthy of cultivation. The remarks, alterations, and additions, under the articles, on the Auricula, Carnation, Dahlia, &c. will, I hope, be found also deserving of attention, and meet the approval of the most experienced cultivators.

Notwithstanding all that I here state in recommendation of this Supplement, I am aware, that it is still an imperfect work, deficient in general arrangement, and not explicit enough in its details ; I have no wish either to over-rate its merits, or to conceal its defects ; for if I have not been able to execute it to my own satisfaction, how can I expect it to give satisfaction to others ? The ideas of men advanced in years become too frequently confused and obscure ; the energy of their minds gets impaired, as well as the strength of their bodies ; and the expression of their thoughts, whether in writing or in conversation, becomes feeble and tedious, like a tale twice told. As to myself, who unfortunately have been an invalid for sixteen years, suffering from paralysis and a diseased state of the nerves, and whose memory and faculties have been affected thereby, I cannot expect to claim any exemption from the like infirmities attendant more or less on old age ; yet while I solicit indulgence

on this account, I seek not, by unmanly concessions, to disarm fair censure and criticism of their just right to examine and judge of its merits; I mean as to the subject matter, and not the manner of describing it. With this admission, which, under ordinary circumstances, ought to have stayed my proceeding with the Supplement, I am bound to explain the motives which have induced me to undertake it. My object is two-fold; in the first place, I have been anxious sometime to amend and supply the defects in my former work; and, in the next place, I have been not without hope of deriving some small profit and advantage by publishing the Supplement on my own account; for the same necessity which obliged me to attempt seeking a livelihood in the garden, after I had been unfortunately rendered incapable of continuing my labours in the school, and I had then been gerund-grinding for thirty years, still exists in all its force; the gifts of fortune have not fallen to my lot; and I am therefore compelled to use the means within my reach for the subsistence of myself and a numerous family: and though I have found a wide difference in pursuing the culture of flowers, as a needful and anxious occupation which I had recourse to formerly, merely as a healthy exercise and agreeable amusement; yet I am bound, in gratitude, to acknowledge, that the light and pleasant labours of the flower-garden, the inhaling the open air, the watching the progress of vegetation, and the quiet and peaceful stillness of the scene, have had a salutary influence, at times, both on the mind and body, in soothing the depressed feelings of the one, and sustaining the infirmities of the other.

Any allusion here to Botany, as a science, in which we florists hitherto have felt but little interested, may appear equally misplaced and uncalled for ; yet I cannot help noticing, that we are not unfrequently taunted and sneered at by the plant-men and gardeners, as an ignorant and conceited set, and likened by them to painted butterflies, flaunting in the sun, merely to display their charms ; and that we can be considered at best but bastard scions, mere idlers in quest of amusement, unworthy of being admitted within the true pale of the garden ; whilst they were entitled, in their own estimation at least, to all its rights, privileges, and distinctions, because their labours were deemed useful to others, like those of industrious bees, who had to labour hard to provide the honey. It is to wipe away this unpleasant reproach from amongst florists, whether merited or not, that I have felt anxious to invite their attention not to the culture of flowers, for in that they excel already, but to other particulars connected with the subject. What should we think of any weaver of silk or cotton, linen or woollen, be he ever so ignorant in other respects, that could not immediately tell you, if asked the question, which material was the production of the silk-worm or moth, which the produce of the tree, and which of the plant and the animal ; and yet it constantly happens, that we ourselves are grossly ignorant not only of the natural history, but of the very names even of the most common plants and flowers, which are exposed to our daily view ; it is a poor excuse to say, I never thought it worth my while to bestow the pains upon them, even so far as to inquire their names. Every professed and practical florist, one would suppose, must feel the propriety of knowing something *at least of the nature and history of the several plants*

under his care ; interest as well as duty require it of him, if it were only to preserve his own self-respect, and to avoid the humiliation to which his ignorance on this head must continually subject him. Not many years ago, any person acquainted with the genera, species, and orders of a hundred or two of plants,* according to the Linnæan System, whose names he had learnt to repeat like a parrot in his own dog-latin, and who had formed a small Hortus Siccus, or Herbarium of his own gathering, passed for a clever botanist ; but as science has continued to advance, and to extend her discoveries over the whole face of the vegetable kingdom, the labours of the botanist have increased also ; besides a correct knowledge of the names, and of the plants themselves, their discovery, and introduction, with the treatment, soil, and temperature necessary to insure their healthy existence, he must understand something of vegetable physiology, of their nature, uses, and properties ; of their anatomical formation, and the various functions of the several parts ; their ascertained or probable duration, with the diseases that have a tendency to shorten and destroy it.

As to the common or every day business of gardening, it may be considered a distinct pursuit, an art, which is first to be learned by imitation, and to be afterwards improved by practice and experience ; and any one who has been trained by good example, and taken part in the customary operations of a well-regulated garden, will pass for a competent gardener ; but if he wishes to understand something more than the mere manual performance

* Sweet's Catalogue, or Hortus Britannicus, contains the names of 34,000 plants ; and Loudon's Catalogue, last edition, contains something more.

of this art, he must commence betimes a severe and tedious course of study, and apply to it all the energy of a mind, ardent in the pursuit; for Botany is become a regular science, and by no means easy of attainment; without a tolerable education, comprizing a moderate knowledge of Latin, and I ought to include Greek also, the attempt would be almost vain; it is for this reason, that a knowledge of Botany has always been confined to few; and those chiefly men of education and studious habits. Yet this should discourage no one, who derives pleasure and amusement from the care and cultivation of ornamental plants, (I confine my observations to them,) from striving to understand something of its outlines or leading principles; he ought to be able at least to dissect the several parts of a flower, and to apply to each its appropriate and technical term: a knowledge of the sexual system, and of the process of impregnation, is indispensable in every florist who wishes to raise new varieties from seed.

Added to all this, he ought to ascertain and understand the nature and properties of the different soils and manures; and to know how to prepare and mix the necessary proportions of each, so as to be able to form a suitable compost for every plant under his care; he will find his success as a cultivator greatly to depend upon this; the last thing which I shall here allude to, are the vermin and insects, which infest the garden, and injure the plants; they call for the utmost care and watchfulness in every cultivator, who ought to learn and adopt the most approved methods of getting rid of them, and on no account to neglect this very necessary duty.

The two last years of 1831 and 1832 will ever be memorable in the annals of gardening, as bad years of business; the agitation produced by the discussion of the Reform Bill seemed to have diverted men's minds from the ordinary occupations of life, and to have fixed them with intense interest on the grand struggle that was making to carry it into a law; the apprehensions and alarm entertained by many of revolutionary tumults and disastrous results, caused them to curtail their ordinary expenses, and to suspend all the improvements and alterations which they had either begun or had in contemplation; the business of planting was at a stand; there was no call for trees, either for the pleasure ground or the orchard; few or no ornamental shrubs, plants, or flowers were required to embellish the Conservatory, the Greenhouse, or Garden, as before; to add to the evil, hardly any Nurserymen's bills were paid, and their credit suffered accordingly.

In the midst of this great stagnation of trade and business, came the Cholera, spreading terror and dismay throughout the whole country, and causing almost instant death to those who were its victims; strict regimens of food and diet were prescribed by the physicians, in which all raw fruits and vegetables were forbidden; the consequence of which was almost ruinous to the Gardener; his salads, and vegetables, his grapes, his cucumbers, his melons, his currants, and gooseberries, his plums, pears, and other fruits, could find no sale, and perished on his hands. Let us hope the evil is past, and that they will be enabled this year to reap the fruits and rewards of their labour.

As the minds of the people were occupied with these grave and weightier matters, they seemed, for the time, to have lost sight of all the lighter amusements and recreations of life; and, on this account, the passion for flowers languished also; for it has been a very common remark, during those two years, that the flower fancy, in the neighbourhood of London, was at a low pitch; and that the spirit and ardour of florists had greatly cooled; that little or no interest was taken in flowers of any sort, and that there was little or no sale of them. I am sorry to be able to add my testimony to that of so many others.

LONDON FLOWER SOCIETY.

The two noted Flower Societies of Islington and Chelsea, which flourished so long, and which served as seminaries and nurseries for raising young florists, have been dissolved; a spirit of discord, arising from envy, jealousy, or rivalry, had some how or other crept in among the members, and disturbed their union, and eventually broke them both up. Death has also removed many of their most distinguished subscribers, and ardent supporters. Another Society has since been formed, under the name of the Metropolitan, which seems to proceed favorably, and which, I hope, will be permanently established; some of the most respectable amateur florists, and others, round London, are enrolled among its members; and to maintain its character for respectability, great care is taken to prevent any improper or disreputable person from entering it; this will render it, of course, more select than numerous. I cannot help here repeating an observation made to me by one of its members, *who complained*, that at their meetings, which

were, to him, of rather a too convivial and festive character, the topic on flowers was seldom introduced, while every other subject, whether on politics, or the common occurrences of the day, was discussed with great spirit and animation.

It has been, perhaps, hardly possible for any half dozen Englishmen to meet together, during these two years of agitation, without being drawn into that all engrossing subject, Reform; yet the discussion of political matters, a jarring topic at the best, had, in my opinion, be better avoided in all such Societies, and the immediate objects of the meeting kept in view.

Since this Supplement went to press, I have received the Prospectus or Outlines of a more extended Floricultural Society, about to be formed, under the immediate patronage of the Queen, and originating in the former. One hundred persons, it is said, have already signified their assent to be admitted as members.

If any dissatisfaction be expressed, that I have introduced so few flowers into this Supplement, while there are so many others equally interesting, the only reason I can give, is, that with the adage of "*Ne sutor ultra crepidam*," present to my mind, I judged it most prudent to confine myself to the culture of those flowers with which practice and experience had made me most familiar; and not to interfere with the numerous periodical publications on the same subject, in which scarcely any ornamental shrub, or plant, old or new, is not only described, but figured in the most masterly style.

Paddington, London, May 7th, 1833.

SUPPLEMENT.

OF THE TULIP.

THE culture of the Tulip seems to have derived additional interest, within these few years, from the production of so many fine varieties from seed ; from which circumstance, this Queen of Flowers has increased the number of her votaries, and fixed more steadfastly the attachment of her former admirers. The success which has crowned, in such a striking manner, the patient and persevering labour of some two or three of our more intelligent florists, has produced a very great sensation, (if I may so express it,) in the minds of all the Tulip growers in the neighbourhood of the metropolis ; and the effect produced by it is already apparent, for a spirit of emulation has been excited, and the hand of the florist is at work. You can scarcely enter any of their gardens, without noticing small beds of seedlings in the different stages of their growth ; twenty years ago, nothing of the sort was to be met with ; sowing the seed of Tulips was seldom thought of ; and as to artificial impregnation, or what is commonly termed setting by the hand, it was scarcely known, much less practised by florists ; to this, in a great measure, the success is to be ascribed. The

new flowers are improved in character, and perfectly distinct from any others ; by this means, also, every other species of plant, or flower, that bears seed, may equally be improved and varied. Men of genius, by patient study, and close observation, are often enabled to comprehend the various operations of Nature, and to bring their experiments, conducted upon her own principles, to a successful issue. A new era may be said to have commenced, as regards the raising of seedling breeders ; and, it is to be hoped, that all our florists, in future, will adopt this plan, and not pick and save the seed at random, and thus waste their time and labour to no purpose. Mr. Sweet, in the *Florist's Guide*, has very forcibly recommended this method, and pointed out, in the clearest manner, its superiority over the common one ; he is, also, of opinion, that the breeders, raised in this way, will variegate the sooner, and produce finer and more distinct varieties. This experienced botanist maintains, still further, that a Tulip of one colour, carefully impregnated with the pollen of another Tulip of an opposite colour, will produce the intermediate colour in the flower raised from the seed, as truly and correctly, as if an artist, or painter, were to blend and mix the same two corresponding colours together, and then, with his brush, pourtray them upon paper ; the experiments that have been made on the *Geranium* fully bear out this assertion. Impregnation by other pollen than their own, frequently takes place in flowers, without our knowledge and perception, by the means of bees, and other insects ; nay, it is effected often by the air itself ; and seed, raised in this manner, has often, without doubt, produced fine flowers.

The highly esteemed breeders of Mr. Drinkwater, were all raised in the common way ; if the Tulips which he gathered the seed from had been crossed with others, he was not aware of it ; he claimed no merit on this score ; the late Mr. Holmes, Mr. Pearson, and Mr. Turner, the same. Mr. Sherwood, who raised the fine Rose breeders, that bear his name, understood nothing of the process. I mention these instances, to show, that it is, however, possible to raise good breeders without any artificial impregnation ; yet, let it be remembered, at the same time, that it is altogether casual and uncertain.

OF SOIL.

There still exists some diversity of opinion, as to the soil most proper for the Tulip—whether it ought to be a strong loam, or earth moderately light and sandy. Some contend that the latter is the best, as the bulbs always rise cleaner, sounder, and with finer coats, than they do when grown in stiffer ground ; and they seek to strengthen this assertion, by a reference to the light sandy soil round Haarlem, and ask, whether our bulbs, in general appearance, are to be compared to those we receive from the Dutch florists. The water, they say, in wet Winters, percolates through it quicker, and passes off sooner, than it does in strong loamy earth, retentive of moisture ; the frost, likewise, acts with less force upon the bulbs, when there is less absorption of moisture ; and the colours of the cups, though still in embryo, will be less liable to start, or become foul ; an injury greatly to be apprehended, because the return to their

former clean state, is always slow and uncertain. Every one is aware how difficult it is, even in the mildest and driest Winters, to preserve some of the choicest kinds of the Bybloemen, or violet-coloured Tulips, in a clear and pure condition, such as Louis, Violet Alexander, Imperatrix Florum, and some others. No one can deny, but there is some show of reason, as well as some force of argument, on their side; yet, after all this, I am bound to state, that our best and most experienced Tulip growers, in the neighbourhood of London, give a preference to the more substantial soil, the strong brown, or yellowish loam, in which they say, the bulbs are found to root more firmly, and grow with greater vigour; and the flower-cups exhibit a richness and depth of colour, seldom to be seen in those which are grown in lighter earth. The Dutch florists, from the very nature of their soil, (I still speak of Haarlem, which may be considered the garden of Holland for Hyacinths and Tulips,) are unable to produce such large blossoms as we do in England; indeed, they frankly admit this themselves. For my own part, I have used both kinds, with various success, so much depends upon the seasons. Fresh rich loam from some upland pasture, hilly waste on common, dug to the depth the fibres run, is, unquestionably, the best; but it will require a year to prepare it for use—the turf and fibres will not be sufficiently decomposed in less time: let it be well broken down with the spade, and turned over frequently in the Summer, and exposed to all weathers, rain and sun; by this means it will get perfectly sweet, and fit for use. If you are apprehensive the earth is impregnated with iron rust, caused by stagnated water, which is found to be injurious,

and disliked by almost all delicate plants, have recourse to a little quick lime, a peck to a load will suffice ; scatter it over in dry weather, and then turn the mould over, that it may get well incorporated with it ; nothing corrects and neutralizes the oxide of iron so readily as lime. As the loadstone will not always detect it, or act on moist earth, unless it be baked and reduced to powder, the readiest and most simple way to try it, is to mix a little of the earth in soft water, and dissolve a bit of hard soap in it ; if the soap curdles in the water, you may then conclude that it is not free from it. Strong bodied loam has this advantage, that it retains its strength and goodness longer than any other, and will bear Tulips very well, for three years in succession, by adding a little decayed fresh turf, or leaf mould, the second and third year ; these are by far the purest and most proper manures that can be applied, particularly to the top part of the bed in which the bulbs are planted ; after which it ought to be removed, and fresh loam put in its place. Some florists renew their soil every two years, and many others, no doubt, are often obliged to make use of theirs after its fertile qualities have become exhausted from the difficulty of obtaining fresh. Alternate planting, or rotation crops, ought to be attended to, which holds good with respect to flowers as well as to other plants, whether of the field or garden ; where you cannot, conveniently, change the site of the bed, you must, as a matter of course, remove and change the soil the oftener.

FORMATION OF THE BED.

As we are all more or less the slaves of custom, and are led by the example of others, I shall not stop to discuss

the propriety of digging the bed exactly two feet deep, and of planting neither more or less than seven rows of Tulips across it; let it suffice, that every body does so. In the site then intended for the bed, which is placed for the most part north and south, begin by removing and throwing on one side all the natural soil or mould as far as it goes; then proceed with the subsoil, and remove it altogether, as it will not be wanted. The bed now remains to be formed of such mould or compost as you have prepared for it; it appears to me quite immaterial what mould you make use of at the bottom with this depth; therefore, you may as well throw in that which you removed first, which I conclude will be about nine or ten inches in thickness; now, as the roots of Tulips like a little moderately rich compost, as well as those of any other plant, to nourish and support them when in flower, I would recommend the next stratum of earth to consist of loam, mixed with a little old and well rotted dung; for my own part, I make use of that in which Carnations grew the previous year; the remainder to consist of pure loam; so then, as the bed is to be raised a foot above the alleys, and to consist of two feet below, then the whole depth will be three feet; the first foot from the top ought to consist invariably of pure loam; the second of loam, and a small portion of old or thoroughly decomposed manure; and the third, or bottom part of the same, or of any other mould. There is one great advantage in having the bed raised so high, independent of every other, as it brings the flowers nearer your view, and prevents the necessity of stooping, which is a position often painful to elderly people.

The bed ought to be got ready at least three weeks

before you plant it, to give it time to settle ; you may then fix the side and end boards to confine the mould, which are generally made of deal, one and a half or two inches thick, and 11 or 12 inches wide ; the length of the end boards being four feet, to correspond to the width of the bed.

Instead of making the bed exactly four feet wide, I would recommend you to add two inches more ; a bed of four feet two inches will admit of seven rows, seven inches apart, and allow four inches between the two outside rows and the boards ; the distance from bulb to bulb in the row to be six inches ; yet many florists allow only six inches apart every way.

PLANTING.

The manner of planting Tulips, as described in my Treatise, has often been objected to, as bungling and unworkmanlike ; I admit, that it is at variance with the general practice, as well as that which we ourselves pursue. The readiest and most regular way is to plant them on the surface, and to cover them afterwards ; and the proper time for doing it, is the first or second week in November. Let the surface of the bed be made quite smooth and level, in the first instance, with the top of the boards, then afterwards rounded a little in the middle to throw off the wet, as it will be sure to settle and sink down something ; then measure and mark off the regular distances of the seven rows with a cord line from end to end, beginning with the middle row ; this may be done by running the notched end of the rake along the cord, which, by a gentle pressure, will leave a small furrow or

indenture in the mould ; then draw the transverse or cross lines six inches apart, from side to side ; this may be readily done by two persons, one at each side, pressing the thin edge of a small board, four feet long, into the mould, the board being slightly curved or arched to correspond with the rounded surface, and taking care to measure the exact distance each time, with a six inch rod or rule, each person holding one ; having marked out the bed, deposit on each spot, where the lines cross, a small spoonful of clean river sand, in preference to sea sand ; which, in more instances than one, has been found prejudicial to the bulbs ; then plant the Tulips in the sand, and press them down firmly, with the rounded side of the bulb to the north ; by thus placing them all in one position, the stems will grow in a more uniform and regular order ; draw the sand close round each bulb with your fingers, and then cover the whole surface with mould to the depth of three inches. In planting the Tulips, it is a work of some difficulty to know how to arrange them, according to their several heights of growth ; any glaring irregularity, in this respect, is unpleasant to the eye, and care ought to be taken to ascertain the row a Tulip belongs to at the time of purchase ; the tallest flowers are planted in the fourth or centre row, the next in height in the third or fifth, the next again in the second or sixth row, and the shortest, in the two out side rows, the first and seventh ; thus the flower cups have a gentle slope from the centre each way, and this order and regularity produce a very pleasing effect, when viewed from either end. To produce an agreeable contrast, as well as a judicious mixture of colours, distribute the three classes of Roses, Violets,

and Bizarres, equally through the bed, so that wherever the eye rests, it may not be offended with a heavy group of flowers of the same colour in any one part.

It has been the custom, time immemorial, to plant Tulips the first or second week in November, rarely exceeding the ninth, or Lord Mayor's day, if the weather permitted; but, of late years, with exception of the two last, the weather has been so mild and open till near Christmas, that vegetation had received little or no check from frost or cold, and the Tulips had begun to make their appearance above ground as early as the beginning of January, instead of the middle or end of February; a sight by no means desired; hence, many had been induced, through this change in the seasons, to defer planting them until the 20th or 25th of November; but as this work is always best done in fair weather, and no one can calculate upon more than two dry days in seven at this season, he ought, by all means, to take advantage of the first that occur; it is all very well to be guided by the weather; but I do not think it worth the while, for one exception or two, to alter a well established rule; the earlier setting in of the two last Winters will, I should suppose, again induce florists to adhere to the old time of planting.

AWNING.

Tulips, that are grown in boxes, and under an awning of stout canvas, arrive at a degree of perfection, which is not attainable in any other way; in fact, it is nearly impossible to bloom them well, and to preserve them from injury of some sort or other, without this protec-

tion ; yet it is necessary to admit all the air and light possible ; for too close confinement effaces the beauty, and deadens the brilliancy of their colours ; it also draws the stems up weak, whereby they lose much of their firmness and elasticity, and are unable to support their cups ; at the same time you must guard them from rain and wind, as well as from the sun's scorching rays ; the most fitting time to give air is the evening, immediately after sun set. Whoever wishes to see a bed of Tulips in flower, should never make choice of a wet or dull cloudy day ; in such a state of the weather the flowers appear languid, and nearly closed ; it is only when the sun shines that they open and expand their cups, and display all their richness and brilliancy of colour.

This Asiatic beauty, this fair Syrian, ought, from all experience, during the period of its flowering, to be an inmate of the Seraglio, and to occupy the Harem, where, being neither disturbed by the wind, nor pinched by frost, nor drenched with rain, nor scorched with heat, it flourishes in great perfection. Tulips, so protected, will attain to a size almost incredible, compared with those left to their fate in the open garden ; the colours gradually develope themselves, and acquire and retain a brilliancy and freshness for three weeks, because they are not affected by any of the sudden and unfavourable changes in the weather ; a fine Tulip, under an awning, may be compared to a " fair lady in her bower ;" it is the beautiful Circassian in her tent, contrasted with the wandering and swarthy Arab of the Desert ; the former, always an object of love and admiration, the latter only of indifference or disgust. Whosoever then wishes to grow Tulips, and to flower them well, must adopt this method,

II

as the best calculated to afford him that satisfaction ; those which are unprotected, seldom engage the attention, or interest the feelings sufficiently, to excite any pleasing sensation of delight in any beholder ; they mostly get injured, are of short duration, and pass off equally unheeded, and unregretted.

OF MATS AND HOOPS.

Wrought iron hoops, formed out of rods, about three-quarters of an inch in diameter, are generally made use of to support the mats ; they shade less, and are lighter in appearance than any other ; they are also, cheapest in the end, as being the most durable ; they are placed about 18 inches apart, and fixed to the side boards in some cases with staples ; others, being pointed at the ends, are only pressed into the ground, and are without any ; a few pieces of tiling laths are fastened along the top and sides, to keep them steady, and to hinder the mats from bagging inwards ; the height of the arch, above the bed, is three feet six inches, and it ought to be rather narrowed at the top, to throw off the wet the better.

TREATMENT IN MARCH.

By the beginning of March the Tulips will have made their appearance above ground, the late as well as the early ; and if the weather be in any degree favourable, vegetation proceeds rapidly, particularly with the Spring blowing flowers ; it will then be requisite, with a pointed stick, to move and stir up the surface of the bed, to the depth of an inch or two ; this will not only sweeten the mould,

but it will enable the rain to penetrate more freely to the roots; the influence of the sun will also be more sensibly felt by them; if the weather is open and temperate, not only expose them to the air night and day, but let them receive all the gentle rain that falls; for this is the time to encourage their growth, that they may shoot up strong and vigorous; but, on the other hand, if the weather be inclined to frost, with cutting winds, as is sometimes the case, then it will be necessary to cover them with mats by night, and the same also, when rain in the day is likely to be followed by frost at night; because frost, after rain, acts more forcibly upon the plants. The flower buds generally begin to shew themselves the first or second week in March, and the leaves, which inclose them, form a kind of cup at their base, which holds water; now, if this water should freeze, the buds which are surrounded by it will be liable to injury; this is often to be seen from the damaged state of the outer petals when blown; to prevent this, the attentive florist, with a foresight and contrivance, which his great care and fondness for this flower could alone have suggested, makes use of a syphon, with a long narrow pipe or tube at the end; with this he goes round the bed in the evening, when apprehensive of frost, and extracts the water from every plant, where he finds it to be lodged. Mother Taylor, the noted Tulip fancier, used to perform this office very adroitly with her kitchen bellows; with a gentle puff she soon dislodged and dispersed the water that was lodged in the base of the leaves.

The anxiety and solicitude which florists feel this month, are hardly conceivable to any one but themselves; as the Tulips are then most liable to injury, they require

almost daily watching ; excess of wet makes the ground cold and damp, and checks their growth, while hail storms and frost bruise and nip both the foliage and the flower buds ; proper care and caution are therefore necessary, yet there are some who over-shoot the mark, who cover when there is no occasion, and who exclude the air when it is most wanted ; by this means the plants are drawn up weak and tender, and spoilt as it were in their infancy, in the way that many a fondly mistaken mother spoils her favourite child, by not allowing it air and exercise when most needful, and by indulging it to repletion when it wants it least ; then languor and feebleness, the effect of too close confinement, follow ; as ill health is often the consequence of the other, the same with the Tulips ; a certain discretion is requisite, with regard to rain ; that from the south, and south-west, being warm and genial, may be admitted freely ; while the cold rains from the north, and north-east, ought to be restricted, and at times excluded altogether. A pretty general opinion seems to prevail, that when rain enough has fallen by the end of March, sufficiently to reach and well moisten every part of the bed, that more is then unnecessary till the bloom be over, as it will be more likely to do harm than good ; still as florists are always obliged to regulate their proceedings by the weather, they are obliged to calculate time something like the almanac makers, a few days more or less, or a week or two sooner or later ; so that if the rain sought for, does not fall in March, they are content to wait and receive it in April.

SUDDEN EXPOSURE TO THE SUN AFTER FROST IMPROPER.

If the sun rise clear and bright after a frosty night in March or April, while the leaves are tender, and in a growing state, do not remove the mats till he has been an hour or so above the horizon; for nothing hurts delicate flowers so much, as being suddenly exposed to his rays when in a frozen state; it is as bad as exposing a frozen limb to a hot fire; mortification will be sure to follow.

PEELING OFF THE OUTSIDE SKINS.

It is customary to strip off the loose outer coats or tunics, that envelope the bulbs every year at the time of planting; by which means they present a finer appearance when taken up; the Dutch and Flemish florists do the same thing, as may be seen from the light-coloured thin coats upon the Tulips they send to England; if left on, these coats become thick, and dark-coloured; they ought, however, to be stripped off with great care, so as not to injure or bruise the bulbs; it is not worth while to meddle with the small offsets; as I am not aware of any advantage gained, except in their appearance.

OF SEED AND SEEDLINGS.

It appears not a little singular, seeing this flower has been so long introduced, and so much cultivated, that we do not possess more varieties of it than we do; one reason

seems to be, that our old florists have been very careless about raising any flowers from seed themselves, but were contented with those they received from Holland, broke or unbroke; another reason seems to be, that there was no great variety among the Dutch breeders, but that they were confined to a few sorts, which they continued to increase and propagate, thus wasting their time, and tiring their patience to little or no good purpose; for when any of those old breeders did chance to break, it was only producing the same flower over again, without adding any thing new to the number. There seems also to have been but little variation in many that were marked as distinct breeders; that one would suppose, they had been raised from one and the same flower; for when they broke, they seemed to be all brothers or sisters, children, and grandchildren, of the same stock and family, and so much alike also, that it was a difficult matter to tell them apart. I am willing to admit, that now and then some solitary florist made the attempt to raise fresh breeders from seed; but it does not appear, that any one of the old florists, within memory at least, has been very successful in producing any very fine flowers; carelessness in the choice of good seed flowers, or the want of them, very probably occasioned the failure. Mr. Clark was not fortunate in his first sowing; he was neither satisfied with the form nor other properties of those breeders; it was not until he had succeeded in obtaining seed from a Louis breeder, from a Charbonnier, and Davey's Trafalgar, and had witnessed the symmetry and fine form of the cups produced from those flowers, that he began to anticipate a gratifying result. By dint of perseverance, and good culture, he has managed to save seed from these

same breeders, as that he has both children and grandchildren from the same parent stock ; hence, it is clear, that much depends upon the selection of the flowers you get your seed from. The Huttons, of Mask, would never have succeeded in obtaining that excellent breed of race horses and hunters, for which they have been long famous, if they had not paid particular attention to the form and symmetry of their brood mares.

“ *Ex quovis ligno not fit Mercurius.*”

Mr. Strong has raised a set of breeders that have produced some excellent flowers ; his last Roses in particular are extremely beautiful ; distinguished alike for the handsome shape of their cups, and the richness of their colouring.

If you wish to save seed from any particular flower, from a Louis, for instance, you must plant it in one of the out beds, that it may have the benefit of the air, and the full influence of the sun when in flower, to prepare the stigma, and open the pollen ; for Nature likes not to be cramped in her operations ; and to make sure of impregnation, you must fertilize it with the farina either of its own anthers, or with that of some other ; for no flower, let the stamens and pistillum be ever so perfect, is certain of self-impregnation ; the anthers are often ready before the stigma ; the dust is then scattered in vain ; showers may intercept it, and other causes concur to render it abortive ; and unless it does take place, you will have no perfect seed. If you remove the anthers of the flower altogether, which you are about to impregnate before you begin, it is not improbable, but the breeders, raised from

its seed, will still retain the shape of their mother Tulip, and receive the colouring from that with whose farina it was set. Every common observer must have noticed, how very few of the finer flowers, that are grown under a covering, are able to produce seed; while the breeders, that are left exposed, bear it freely; those breeders also, to insure their seeding, ought to be set by the hand, and crossed with the anthers of your best named flowers.

No one must expect to find the flowers, that have been raised from the same capsule of seed, to be all equally fine, and all exactly alike; like other similar productions of Nature, they will not all come perfect; some may be misshapen in the cups, some weak and ricketty in the stems, and others deficient in rich colouring; again, though raised from one coloured flower, from a Rose for instance, you must not be surprised if they do not come all Roses, though very probably they may do so; yet it is also very probable, that among them you will find violet coloured as well as bizzarred Tulips; I mention this to point out the inconstancy of flowers produced from seed. Nature, in her own operations, is said to be true and consistent, when left to herself, and not crossed and disturbed by other agents; thus, the different species of plants, when self-impregnated, and bearing seed, would, I conceive, continue their own form and colour to the plants raised from it. Suppose fifty seedlings have been raised from the same capsule of seed, these fifty, in all probability, will prove as many different breeders, all producing, when broke, very distinct varieties; but those varieties, once broke, and propagated afterwards by offsets, ought to remain as the same flowers, and all under one name; unless, indeed, the difference

be very striking. It is no less mischievous, than absurd, whether proceeding from idle vanity, or a worse motive, to give a new name to the offsets of any broken flower, old or new, because it may happen to have a stripe or two less, or the feathering round the petals more or less broad or distinct; this shameful practice is becoming too prevalent, and is the cause why we often find the same flower with two or three different names. Those seedlings, or breeders, in five years' time, if well taken care of, will bear flowers, and produce you full sized cups; then is the time to examine their properties, and to weed out such as are not likely to make good flowers, and, therefore, not worth keeping; retain those only, whose cups are well formed, and whose bottoms are clean, whose petals are rounded, broad and firm, and whose stems are strong.

SEED GATHERING AND SOWING.

When the seed vessels begin to split open at the top, and the grains turn brown, or of a chesnut colour, it is time to gather them; cut the seed vessel off whole from the stalks, and having placed them in a pan, set it on a shelf in front of the greenhouse, or under a hand-glass, for two or three weeks in the sun by day, to harden and ripen it the more; after which you may shake it out of the pods, and deposit it in some dry place, in a paper bag, till the time of sowing.

The usual time of sowing in Holland and Flanders, is in September, and some of our florists do the same; taking care to preserve it from the frost when sown; but as the seed, whether sown then, or three months later,

will not make its appearance before March, I see no necessity in doing it so soon. The seed is of such a thin light body, that if it is not well hardened, and dry, I think it will be more liable to perish by lying so long in the earth ; and that your chance of a good crop will be less, than if it were sown about the middle of January, according to the directions given in my Treatise. I grant, there are many kinds of seeds that will not keep, and which require to be sown as soon as ripe, to insure their growing at all ; but this is not the case with Tulip-seed, as has been proved.

In regard to taking up the small seedling bulbs the first year, as soon as the leaves are withered, and keeping them out of the ground till the time of planting, at the end of October, Mr. Sweet, in his *Florist's Guide*, expresses his opinion thus. " Let them remain in the pots, or boxes, in which they were first sown, till the middle or end of October, when you may remove them, and plant them in the ground about two inches deep ; afterwards, you may treat them as you do the rest ; and if they are well managed, they will flower the fourth and fifth year, and begin to break the seventh and eighth."

MARKS FORETELLING BREAKING, &c.

There are florists who can anticipate, with tolerable accuracy, the breaking of certain Tulips two months before their time of flowering ; the signs and prognostics by which they judge, are pale green streaks upon the leaves, a kind of faint variegation, which precedes and indicates the change that has taken place in the flower ;

these signs are not always seen in the breeder that has broke, neither are they always infallible.

It has been fully ascertained, that the seed of a Rose Tulip will produce all the varieties of Rose, Violet, and Bizarre; but the current opinion, though unsupported by any proof that I know of, is, that the seed of a Bizarre, or Yellow Ground Tulip, will yield only Bizarres.

There is great inconstancy in the Tulip; the variegation in the cup differs more or less every year in those flowers, in which the remains of the breeder, or mother colour, exist; if it is ever regular and constant for any length of time, it is in those Tulips which are called fine, and which have got rid of it.

OLD BREEDERS OF LITTLE VALUE.

There are none of the old breeders now worth preserving, hardly even excepting the once famed Charbonnier Breeders, that Mr. Mason, of Peckham, used to prize so much; Mr. Groom, of Walworth, with really a noble effort of mind, sacrificed, two years ago, not less than four bushels of old breeders, which had been accumulating in his possession, and in that of his predecessors for years, and which never repaid them the trouble of planting.

THE COW, AND THE SAILOR, BOTH TULIP-FANCIERS.

Some curious person, by chance, may wish to know in what manner Mr. Groom disposed of them; if so, I can inform him, that he gave them to his cow; and that she relished the delicious, though novel repast, as heartily as any boy ever did an apple.

The sailor did not relish one half so well, who, in company with a ship-mate, went into a public-house at Limehouse, and called for a glass of rum each at the bar; having displaced his quid, and espied a small onion, as he supposed, lying on the table; while Mr. Belcher, the landlord, turned round to serve the liquor, he whips it up, dips it in the salt cellar, and eats it; my eyes! master, says Jack, but this onion of your's tastes rather queer; the landlord, looking aghast with astonishment! exclaims, damn the fellow, he has swallowed my twenty guinea Louis, which I had just been peeling ready to plant. Mr. Groom can now boast of some excellent breeders of his own raising; and though I am not bound to notice and proclaim the success of every florist, who has raised Tulips from seed, yet I cannot in justice omit to make mention of the breeders, raised by Mr. Franklin, of the City Road, Islington, which are now beginning to break, and which have already produced some flowers, among several others, of the greatest excellence and merit; they are worth going to see; for one of these, he was repeatedly offered the sum of twenty guineas, which he refused; and there is no doubt, but the value of this Tulip, had it broke with any of the private amateur florists, would have been estimated by them at double the amount.

TULIPS BROKE FROM MY OWN, AND MR. CLARK'S
BREEDERS.

After having made mention of the new Tulips, and the breeders of other florists, I trust I may be pardoned, if I say something of my own. The following letter:-

I have very accidentally put my hands on, in turning over some old papers, where it had lain these ten years, will explain the conditions, and from whence I derived them, consisting of breeders, one year's seedlings, and seed.

Croydon, Church Street, Sept. 23, 1822.

“ Dear Sir,

“ You will herewith receive a pair of the Adonis Pink, as sent to me, with some Breeder Tulips, &c. But I would not have you, or your sons, expect that I have sent you my very best; although, I believe them to be such as will make very fine flowers. Some of them you will see have bloomed, and are such as I had selected for myself, though not of my double Ex. Ex. or exquisitely beautiful; others, mixed with them, have never yet bloomed, so that your sons may expect some of them will be very fine, and others which they may throw away, as is always the case with seedlings.

“ The seedlings of this year, sowed last January, will some few of them bloom from the third time of planting, and many of them from the fourth; and will doubtless produce you something fine and beautiful, as the seed was from fine flowers.

“ The seed, which is also saved from selected breeders, (the advice of sowing it, perhaps, will not be unacceptable to your sons,) will, I think, cut out some work for them; they will now be enabled to begin pretty well; and if they save seed next season, they will have a succession each coming year. Tell them I wish them success; and

if, as it is said, pleasure is by anticipation, they will surely have enough of it; and tell them also, not to value the seed, seedlings, &c. the less, for having come easily by them, as they will, no doubt, produce some double XX. Tulips.

“ You will give me a note to say, that you have received this and the Picotees, which I before sent to you. For your’s I am much obliged, and also, for your book. Should any of the Picotees, I sent you, fail, let me know, and if I can replace them, I will endeavour to do it.

“ Your’s, much obliged,

W. CLARK.”

To Mr. Thomas Hogg.

N.B. With those few, whom I have put in possession of my breeders, the stipulation is, that the first offset of a fine new broken flower is to be sent to me.

These breeders having been so long in my possession, and cultivated with much care, have increased in an extraordinary manner; yet in consequence of their being all the time confined to the same narrow spot, the same soil, the same air and climate, they have not broken in any degree proportionate to their age, strength, and number; it is true, they have produced some very excellent flowers of all kinds; among which, Erasmus, Tasso, Aristides, Hampden, Virginia, Anne Boleyn, &c. claim the first distinction. The last season of planting, I transferred them to another garden of open and airy situation, where the soil is of a stronger quality,

loamy, and brown in colour; and which, I dare say, has never borne a Tulip before; I anticipate, with some hope, that this change will be attended with advantage to them every way; that the bulbs will increase in vigour, and that their variegation will take place the sooner. Those breeders are now become too numerous for me to cultivate, without great inconvenience; hitherto, I have not parted with one to any person, though I have been often solicited to do so; I made it a point of honour to retain them, while Mr. Clark lived; though I, as a dealer, was not interdicted, as will be seen by the tenour of his letter, from so doing; but as both his Tulips and breeders have been lately sold, and dispersed in various directions, I now feel myself at liberty to act as I may judge expedient; that these breeders have already produced, and will still continue to produce, many very superior flowers, is a matter of fact too well established, to admit of the least doubt or uncertainty. I purpose selling two or three hundred of them, which I offer at £5. per hundred to any one, that may be desirous to purchase, which is not half the amount I could have obtained in Mr. Clark's lifetime; they have never been classed or separated, but grown promiscuously, as Bizarre, Bybloemen, and Rose Breeders.

NEW FRENCH TULIPS.

While I am upon a subject that so immediately concerns myself, permit me to recommend to notice and inspection, the following short list of Tulips, among many others, which I have, within this year or two, received from France; their cups are of the finest form, and free

from all stain; the colours of the Roses chaste and bright, and those of the Violets clear, and of dark purple; the lines and stripes of both clean and distinct, and the feathering elegant and various, heavy and light, close in some, and slightly broken in others; they have been strictly examined by two or three of our best judges, and pronounced beautiful, and of the highest merit.

BYBLOEMEN, OR VIOLETS.

Charlemagne.

Fenelon.

Artabanes.

Duchess of Kent.

Comtesse de Verteuil.

Volney.

ROSES.

Aspasia.

Camilla.

Claude.

Hortense.

Pamela.

Pulcheria.

Cleomenes.

Nereide.

And Memnon—Bizarre.

DISCRIMINATION OF COLOURS.

I am well aware how difficult it is to weaken the force of habit, and to remove the prejudice against change, in matters of the most trifling import; yet, to expose the absurdity of a thing, may be considered as one step towards its correction.

In the description of flowers, the colours ought to be more correctly defined than they are at present; the

painter and the dyer cannot but smile at their absurd misappropriation, by florists. Take, for instance, red, the first of the seven principal, or primary colours of the naturalist, and consider the number of subordinate, or minor colours, which it may be divided into, and to which distinct names have been given; again, mark the many various shades, or prevailing hues, of the several minor colours, to distinguish which more accurately, a further description, or explanatory epithets, are required. In the first place, the simple, or common red, resolves itself into crimson, carmine, lake, cherry, &c., into scarlet, vermillion, red-lead, blood-red, &c., and into rose proper of many different shades, which, as applied to a Rose Tulip, comprise nearly all the above under that one name. Again, with respect to violet applied to the same flower, it is made to comprise all the shades of purple, light, pale, lilac, black, red, blue, brown, maroon, &c.

What can be more silly than to apply scarlet to the common red Picotees, when we have Picotees of pure scarlet—or more improper, than to give the name of Scarlet Bizarre, to a Carnation, whose prevailing colour is a dull, or common red? I am pleased, however, to remark, that florists have lately taken more pains to class and describe the different colours and shades of the Dahlia, which, no doubt, is a difficult and perplexing task to any one, who has never before minutely considered the subject, or carefully examined the different gradations of colour.

The French florists, the Parisian in particular, far excel us in this respect; they give a more precise and clearer description of the various properties and colours of their Roses, Tulips, Carnations, &c.; their only

fault is, that they over-do it; they over-charge these descriptions, and colour them too highly.

I, as an old florist, who understand something of "poetical license" myself, and am, therefore, prepared to allow that license in others, know full well, that a florist's lively imagination will sometimes direct and mislead his sober judgment, and prompt him to pay flattering compliments to his favourites; the truth of which, a Locke, or a Euclid, would find great difficulty in proving.

What florist can check his longing, or withstand the tempting allurements, when he reads of "*forme la plus seduisante, Odeur douce, fleur charmante, fleurs magnifiques, très doubles et bien modelées très gracieuses; superbe Cramoisi-feu; gorge de Pigeon; bleu celeste; cerise carmin bien ombré; fleurs très riches, leur Colori Rose d'une grande beauté; Rose admirable; Tulipes très precieuses, fond blanc de Neige, &c.*;" and yet, with all these fine qualities ascribed to them, many of the flowers which have been sent to us, have proved very indifferent; something like the bird in the fable, which, instead of a "*Rara Avis*," or bird of Paradise, was, when stripped of its borrowed feathers, and examined closely, nothing more than a common Daw.

SNOW AND THAW.

In the Winter of 1829, a considerable quantity of snow fell, and remained five weeks on the ground, which served as a covering to the Tulips, and protected them from the frost. At the commencement of the thaw, I removed the snow from the surface of the bed, and, therefore, prevented it from being soaked and chilled with the

snow water ; though the Tulips were then just beginning to pierce the ground, the foliage was not in the least injured.

In the Winter following, in which we had much rain at the beginning, and a heavy fall of snow towards the middle, accompanied with frost, when the thaw took place near the end of January, I, somehow, neglected the precaution of removing it, and the bed was completely soaked with snow water ; the usual time for covering was not yet come. In ten days, frost returned again, as the Tulips were making their appearance ; by which means, many of the leaves got frost-bitten and cankered, which shewed itself as they grew up and expanded. Now, it is well known, that, if the cankered parts are not cut away, the canker will not only injure the leaf, and infect the stem, but will often communicate itself to the root, and destroy the flower altogether.

That year, also, I remember some of the florists saying, that many of their flowers were too full of colour, meaning, in plain English, foul, caused by the wet Winter, and the cold wet thaw.

Another evil consequence was, that, in low and confined gardens, where even drying winds cannot act with the effect they do in open situations, the ground remained cold and wet till the middle of April, before the sun was able to impart warmth, and give vigour to the growth of the plants.

FLOWERS UNDER TWO NAMES.

Acapulco, or Siam ; Hebe, or Queen of England ;
Andromache, or Globertine ; Gloria Mundi (white,) or

Gloria Alborum; Hector, or Milo; Pretiosa, (fine,) or Thunderbolt; Catharine, or Athalia; Duchess of Wellington, Boadicea, or La Joie Blanc; Harmodius, Foudre de Jupiter, or Navarino; Tippoo Saib, or Buonaparte; Pearson's Helena, or Georgius Tertius; Matilda, or Rose Ruby; Heroine, or Triumph Royal; Triomphe de Flora, or Domingo; Alcon, or Alexander Magnus; Director General, or Gloria Mundi; Platoff, or Waterloo; Fortescue, or Albion.

DIFFERENT FLOWERS FROM THE SAME BREEDERS.

Captain White, Abercombie, San Joe, and Gabell's King, broke from the same breeder; Lawrence's Duke of Clarence, and Davey's Trafalgar, from the same; La Mere Brune, Swartz's Violet, and Violet Triomphant, from the same; Grandeur Touchante, Rex Nigrorum, and Cornwallis, from the same; La Pureté, and La Tendresse, from the same; with many others.

ON THE CHOICE OF TULIPS.

A correct taste and discrimination, even in the simple article of Tulips, are neither hastily formed, nor acquired. Time and opportunity, to see and compare the best models, are indispensably requisite; for, a knowledge of Tulips, like that of pictures, comes gradually, and progressively; for many a one has been mightily pleased with a very indifferent flower, until he had the opportunity of seeing a better; for the external figure of a Tulip cup, to a common observer, appears pretty much the same in all; yet, in examining them closely, you will hardly find two shaped and coloured exactly alike.

There are some persons, it is true, but not many, who seem innately to possess a just perception, and a correct taste, of what is fine and beautiful, whether in art, or nature; and to be able, at first sight, to hit upon the choicest productions of either, with all the tact of the most experienced artist, or the most skilful connoisseur: on what known principles, then, or by what fixed rules, is a judgment to be formed? The answer is not so easy, and the same difficulty would be felt, if the question applied either to pictures, or statues, or other works of art. The beauty and excellence of the marble and porphyry vases of the ancient Greeks and Romans, consisted in the elegance of their forms, and the nice symmetry and proportions of their several parts, independent of the quality of the materials, or the richness of their ornaments. The same may be said of a fine Tulip; if a model were required to judge by; some would say, take "*Rosé cerise à belle forme*" for one. The connoisseur will tell you, give me a cup in shape like a goblet, and, in appearance, capable of holding water, nearly even at the top, well rounded at the base, and not too deep, having, what florists vulgarly call, a good shoulder; the depth being in proportion to the width, and the three outward petals standing up firmly and closely.

Louis cannot be called a perfect model, though a magnificent and highly prized Tulip, because, when full blown, the outward petals begin to recline backwards, and lose their upright position; when this takes place, the gracefulness of its cup is gone.

VARIATION.

After you have made choice of the cup, the variegation, or ornamental part, requires next to be considered. This is depicted in various ways; when the variegation rises upwards from the bottom of the cup like a lambent flame along each petal, and branches outwards, each leaf then forms a separate picture; it is then called a flamed Tulip; for it is in the interior of the cup, that its great beauty, and most striking character, must be sought for.

Yet, a Tulip is not the less prized, which is without the broad splash of colour up the middle of the leaves, but with broken lines here and there, and the extreme parts of the petals delicately feathered inside and out, as if executed by the most elaborate art; and, with small breaks, or gaps, sometimes intervening; when the variegation is upon a white marble ground, and marked in this manner with either rose or violet, it is called a feathered Bybloemen, or feathered Rose, according to its colour.

When a Tulip is feathered with dark purple, and has got rid nearly, or wholly, of the mother or breeder colour, which generally runs along the centre, or middle of the petals, and which, in a Bybloemen, is mostly of a light violet, or purple, it is esteemed the more; because, being less loaded with colour, it presents a lighter and livelier appearance; and this will serve to explain, what is often inserted in catalogues, “ the price according to its fineness, or quality.”

PURCHASE.

To purchase Tulips is a very nice and ticklish affair, at the best; even the most cautious and experienced find it so. It is not enough that you get the flower correct as to name and sort, but you should be assured, also, that it was clean, and in colour, for, on this its value depends; a foul, or run flower, is dear at any price. Few Tulips, it must be admitted, present the same appearance every year, though some are more constant than others; the form of the cup remains, of course, the same, but the lines, stripes, and feathering, vary very frequently; for instance, if a particular Tulip was drawn and coloured by the most correct and able artist, this year, you must not expect it will remain a faithful portrait, or delineation of the same Tulip, the next; nor is this greatly to be wondered at, since the Tulip forms a fresh bulb every year; by this, I mean, that every Tulip, which bears a flower, renews its bulb. Young seedlings and offsets being too weak to flower, of course, do not undergo that change.

This inconsistency often serves as a cover for fraud, and as a plea for deception. The great similarity of some Tulips in shape and colour, will sometimes tempt a knavish dealer to substitute one for another, and to sell the common low priced copy, for the scarce and expensive original. The only safe and satisfactory way, is to select and buy Tulips when in bloom, and to attend and see them taken up. For my own part, I would always sooner deal with a person of respectable character, in whom I could place confidence, than with one of a doubtful one, even though I paid something more.

SALES BY AUCTION.

In the sales of dry bulbs, which frequently take place, by public auction, there is always great risk and uncertainty in buying; and let the deception practised be ever so barefaced and roguish, there is no redress by law; for the auctioneer makes it one of the conditions of sale, "that they are to be paid for, and taken away immediately after, with all faults and errors of description," so, that, neither he, nor his employers, are responsible. There is no lack of buyers, I believe, on these occasions; the burnt child, they say, dreads the fire, but he must be burnt first, it seems, before he feels the dread. I have, myself, purchased both flower-roots and experience at the same time, at those auction marts, but I do not think that I have profited much by either;—too credulous to suspect wrong, or too simple to take warning, I have sent to purchase more. There must, surely, be some infatuation attending the dabbling at those sales, as there was, formerly, in dabbling in the lottery, though blank followed blank, and no prize. I have been deceived, or, more properly speaking, I have been cheated alike in Hyacinths, Tulips, Ranunculuses, Dahlias, and Carnations.

If, unawares, you attend a mock auction, and feel inclined to purchase any articles of furniture, you trust to your eye-sight, and judgment; but, in the sale of flower-roots, you have nothing to guide you, nothing to trust to, but the supposed good faith and probity of the vender; if they are found to be correct when they flower, it is all very well; and if they are not so, it is useless to complain, because there is no remedy.

The idea of buying cheap, I suppose, is the great inducement with many; but what is the use of buying cheap, if you are dissatisfied with your bargain afterwards. Very few young florists are able to detect impositions of this sort, therefore the complaint is not so loud and general, as it otherwise would be; and when they are detected, many are ashamed to confess that they have been duped, and taken in. My observations here, apply more particularly to the dry bulbs of Tulips, and Ranunculuses.

It has been pertinently observed by one of our old and respectable florists, a Tulip grower, that there are no private fanciers now a-days, who cultivate them solely for their own gratification, as was the case formerly, with Mr. Bullock, Mr. Holmes, Mr. Walker, Mr. Austin, and many others, but that they are all dealers; and that he made it a rule himself, never to attend any of those private sales, either of dry bulbs, or when in flower; as he was well aware, that, in too many instances, they were made up, to get rid of their inferior sorts; and that, if any very fine Tulips were introduced in the bill of sale, they were only placed there as decoys, and either bought in, or sold dear. The first part of this observation, let it be understood, can only apply in a general sense; for there are still some few exceptions of gentlemen-amateurs, who grow them purely for amusement.

These cautionary observations, I am aware, will have little weight with such as frequent those sales; neither will they cause any alarm to the auctioneer, whose only interest in the sale, is his commission money; for he knows full well, that, as society is at present constituted, he will never want purchasers, at some price or other,

as there will be no lack of "Johnny Newcomes," on such occasions, who are making their appearance in the world every day; nor of many others besides, with whom a cheap lot is every thing, be it right or wrong.

Not long since, a sale of Tulips, belonging to a person deceased, was advertised twice in the Times Paper, stating, that catalogues were to be had a few days previous, at three separate places. I sent twice to these three places, (the last time, on the morning of the sale,) and found that not a single catalogue had been left at all by the auctioneer. The man, I have no doubt, did not forget to charge for catalogues, which had never been printed even, much less distributed.

There are some persons unreasonable enough to suppose, because they have money in their pockets, that they are intitled to go and pick out a few of the finest flowers only, in any one's bed, and to affect great surprise, when they are told, that there is no wish to part with them alone, though a fair price be offered. There is, I believe, but one general sentiment and feeling among florists on this point; they are unwilling to let their best flowers go, which are the chief ornament of the bed, and on which they pride themselves, without some other contingent advantage, because they well know the extreme difficulty of replacing them; opportunities of doing which occur so seldom, except at sales occasioned by death, and which may, probably, not happen in their own lifetime; so that this refusal to sell, ought to be a matter of surprise to no one. The only instances worth recording, in my time, were the sales of Mr. Mason's Tulips, at Peckham, some years ago; of Mr. Holmes's, of Clapham; of Mr. Medicott's, of Dulwich; of Mr. Andrew's, and

Mr. Searle's, in Essex; of Mr. Clark's, of Croydon; and of Mr. Slater's, of Newington. By those several sales, many very choice and excellent Tulips were disposed of, and circulated among florists. I can, also, very justly state, that nothing can be fairer, or more honourably conducted, than Mr. Strong's occasional sales of fine Tulips.

On the other hand, it must be admitted, that it is very difficult to deal with some men; they are so unreasonable, they cannot find in their hearts to part with any very good flowers, though they have them to spare, and are quite ready to take your money; you may as well try to extract their eye-teeth; and yet they are ready enough to sell you any that are common, and plentiful. If they are, at length, prevailed on to sell two or three choice flowers, along with others more common, they seem as if they wanted to retain them still, and the money also. The case is very different, when applied to a person who has had the good fortune to raise and break a new and superior flower, or to import one of the same character from abroad; he has a fair right to make the most he can of it, and to keep and increase it, before he is called upon to sell.

On the other side of the question, there are some persons mean and unjust enough to offer a quarter of the value for an article; and so suspicious and mistrustful, that they never fancy they have got it right; such persons cannot be over honest themselves, or they must have been grossly imposed upon before, to justify such unwarrantable suspicion. No inexperienced person can safely, at first, trust to his own judgment, either in the purchase or the choice of Tulips, whether in the dry bulb,

or in their flowering state; he ought to consult some friend, who knows something of the flowers as well as their names; neither ought he to be anxious after a numerous collection; a few, well-selected, and of real merit, the effects of which are always valuable, will answer his purpose best, and soonest repay the care and trouble of growing; it is not with florists, as it is with botanists, who want all the species of every genus, and all the varieties of the species; the florist seeks only to cull the handsomest. Neither is it prudent always to ask an opinion of an interested person, as it is too often given with a view to his own advantage. When you hear any one boast, that his collection contains all the flowers worth growing, and that he can accommodate you with every thing that you want, only leave the selection to him; do not be too much surprised, if you are weak enough to do so, should you get, after all, every thing that you did not want, or, at the best, what was hardly worth having; after all, every one has a right to please himself. The custom, round London, is for all bulbs to be paid for on delivery; the rule should be made to apply to all other florists' flowers as well; no one has a right to seek to indulge in pleasure, and gratify his fancy, that cannot afford to pay for it. Who goes to a play-house, fair, or other place of amusement, without money in his pocket? In the neighbourhood of this vast metropolis, without this precaution, you would be continually beset and pestered with those empty skakebags, and men of fair and plausible promises, which are hardly ever kept.

Let a florist use all the caution that he can in his deal-

ings, he cannot escape imposition, and avoid making bad debts; if the agreement is made for ready money, and the buyer says, he will attend, and see them taken up, it is a great chance if he does not affect to be very busy at the time, and send word that he wishes them to be sent, when they will be paid for; yet many flowers have been so sent, but never paid for. My confidence has often been grossly abused by persons who have promised, either in words, or in writing, to pay for flowers as soon as they received them, and which flowers have never been paid for; I could furnish a pretty long list of those, whom I may very justly style, my fraudulent debtors, the exposure of whose names to public view, would be to them, perhaps, the most fitting punishment.

Our English florists have now quite outstripped the Dutch in the production of fine new Tulips; and, therefore, very seldom resort to them for Tulips; indeed, whatever new flowers the Dutch dealers have had to offer for sale of late years, have been the produce of the Flemish gardens; the active and enterprizing Tulip amateurs of France and Flanders, are the only persons that can be said to fairly rival us in the raising of new flowers, and with whom the rose and violet coloured Tulips are still the only two kinds which they seem to prize; Bizarres are scarcely deemed by them worthy of cultivation. As the choicest of these new flowers are mostly in the possession of private growers, and for which high prices are asked, there is great difficulty in procuring them; I have succeeded solely through the kind offices of friends; for there is little chance of obtaining any thing very fine from the trading florists;

though their regular charge to strangers is 10 francs per bulb, good or bad, because they grow such numbers of foul bottomed Tulips, which, to an English florist, are, comparatively, worth nothing.

ON THE BREAKING OF TULIPS.

Having written a few observations in the form of a Letter, which was addressed to the conductor of the Gardener's Magazine, and published by him, on the delay, difficulty, and disappointment, that florists had to encounter with respect to the breaking of Tulips; and having therein stated, with very sanguine hopes of its answering, that a new idea had been started, whereby the variegation of the Tulip would be greatly accelerated, and that a course of experiments was about to take place, to ascertain, how far the idea, when acted on, was likely to take effect; it may, in all probability, be expected, that I should say something further on the subject; that I should declare, whether those experiments had taken place, and whether the result had proved satisfactory, or not.

To enable the reader to comprehend the nature of those observations, and to form a correct opinion thereupon, I have judged it right to introduce in this Supplement the directions which I published for putting it in practice; and which, if found to be of no other real value, will at least serve to explain and point out to the uninitiated florist the process and use of impregnation.

"Hæc Metamorphosis non delirare poetas."

TWO NEW METHODS OF BREAKING TULIPS, ONE BY
INOCULATION, THE OTHER BY A CHEMICAL PREPA-
RATION OF COMPOST.

Breeder Tulips, whether of long or short standing, are first raised from seed, and then propagated by offsets; and are all plain, or of one colour, though of different shades, till they variegate. Seedling Tulips seldom arrive at maturity before the seventh or eighth year, in respect to the growth of the bulb, and the fullness of the cup.

In order to enable those who are unacquainted with the rudiments of Botany, to comprehend the nature of this plan, and the process made use of, it may not be amiss, in the first place, to describe the class and order of this flower, according to the Linnæan System.

The Tulip is a bisexual plant, "Familia Liliaceæ, or Lily tribe, and belongs to the Hexandria Monogynia, or sixth class, order one; because it is furnished with six stamina of equal length, which constitute the male part of it, and with one pistillum, which forms the female part. The stamina, or male organs, consist of two parts, the filaments or threads, and the antheræ; the antheræ are the top part of the stamina, and contain the pollen or impregnating dust. The pistillum, or female organ, in general consists of three parts, the germen, the style, and the stigma. The germen is the lower part of the pistillum, which contains the seed in embryo: the style arises out of the germen, and elevates and supports the stigma;

and the stigma is the summit, or top part of the pistillum, communicating by a secret duct with the germen, and contains the fluid to catch the pollen; the pistillum of the Tulip has however no style; the stigma resting on the germen, and is therefore termed sessile, meaning, without support or footstalk. In further illustration of the sexual system, the Carnation is also a bisexual plant, having the male and female organs of stamina and pistilla on the same flower; but it belongs to the tenth class, order two, Decandria Digynia, because it is furnished with ten stamina and two pistilla, (the latter vulgarly called horns by florists.)

To impregnate one flower with the pollen of another, the process is as follows:—take the stamina of one, when fully blown, and shake them lightly on the stigma of the other; that, by the contact and the concussion, the antheræ may discharge and deposit part of the pollen thereon, to fecundate the germen, in which the seed are formed and brought to maturity; it afterwards takes the name of pericarpium, or seed-vessel; it is the germen, also, which forms and perfects the fruit and seed in trees. Artificial impregnation is done to cross the breed, with a view to improve the quality of fruits, flowers, and vegetables, and to raise new varieties.

In the Tulip the antheræ are nearly black, when full blown, and appear fluttering and in motion; when slightly agitated by the air, the pistillum stands in the centre of them; and what is very remarkable, the antheræ can be displaced and removed, without the least apparent injury or violence from the filaments; when the antheræ are taken off, they present, on examination, a small hole or socket, one-eighth of an inch deep, in which they were

fixed, and growing to the tops of the filaments, the points of which are tapering, and as finely pointed as needles; the whole appearing more the work of art than of nature.

It was the casual removal and extraction of one of these antheræ, that first suggested the idea of inoculating the breeder Tulip, and pointed out a mode, at the same time, of impregnating it, without the necessity of plucking the variegated Tulip. With respect to simple impregnation, it would be too much to suppose, that a change in the colour of the flower could be effected thereby alone; for the effect produced, could only be proved in the ordinary way, from the seed of that flower, when sown again; whether impregnation does really contribute any thing towards the change, I cannot at present determine; but the basis, on which I principally ground the present theory, and my hope of success, is the insertion of the stamina of the broken Tulip upon the unbroken, the inoculation of the variegated upon the unvariegated, thereby producing an intermixture of saps and juices, which, by their circulation, must extend through the whole plant, and so communicate the disease, vulgarly, though, perhaps, improperly so called, and produce the variegation sought for.

We every day have ocular demonstration of important changes being brought about by seemingly very trivial causes. The great number of Tulips broken last year by the person, to whom I am indebted for this discovery, he attributes solely to this new method; he can divine no other cause; and I am anxiously waiting to receive from him further corroborating proofs of its efficacy this year.

The cause of variegation in the leaves of plants and

shrubs, as well as in the petals of flowers, as far as I have had any opportunity of ascertaining, is very little known; it is attributed to disease, but the cause is not assigned: were I to hazard any supposition of my own, I would say, it probably may arise from sterility in the soil, and lack of moisture in hot seasons; from some obstruction in the circulation of the sap; or from the roots imbibing certain alkaline or acid particles in the earth, which have the power to discharge the prevailing self colour, and to force it into lines and streaks. Variegation, whether from nature, or accident, when it has once taken place in the leaves of plants and trees, appears constant; but this is not the case with respect to the leaves or petals of flowers; many of which discover a continual tendency to revert to their original plain colour; and the greatest care is necessary in regard to pureness, as well as pooriness of soil in some cases, to preserve and continue the variegation. It is a well known fact, that if a collection of fine Tulips were planted in a bed, strongly manured in the way, beds of Pinks and Ranunculuses are manured, they would be completely spoiled; the flower cups would be stained, blotched, foul, and run; it would be a work of years, if indeed they ever recovered their former cleanness and purity of colour. In preparing compost for breeder Tulips, the French florists, many of whom are men of much botanical science and ingenuity, use a large portion of old mortar and lime plaster, with a view to absorb all redundant moisture, and to check a too copious flow of the sap; to which, in my opinion, the addition of a little salt would be highly beneficial, to purge it, and to assist in cleansing the colour.

Many florists, whom I could mention, whose patience has been exhausted on the unvarying stubbornness of the old breeders, yet anxious to obtain new varieties, have, for some time past, been raising seedlings from their choicest flowers, in the expectation, though a mistaken one, that the seed of the broken Tulips would produce broken Tulips; or, at least, that they would sooner break into colour: but it has been generally remarked, that all variegated flowers are more tender and delicate than the plain coloured; and that the seed, saved from the former, would produce neither such large bulbs, nor such large cups as the latter, (this idea I conceive to be erroneous;) on which account, the more experienced, or, at least, those wedded to the old system, prefer saving seed from the breeder. It is said, Davey's *la Joie* and *Trafalgar*, were both raised from the seed of a *Louis* breeder; but *Lawrence's Duke of Clarence*, was a seedling direct from *Trafalgar*, and his *Polyphemus*, from *Charbonnier*, both broken flowers. Therefore, I recommend a perseverance in both methods,—I advise all florists to reject and throw away such seedlings as have small cups, foul bottoms, pointed petals, and weak stems.

As regards seedling fruit trees, it has been ascertained, that no great degree of perfection is attainable, in some sorts, till the third or fourth generation; probably, such may be the case, also, with the Tulip.

Having extended my observations thus far, I will now endeavour to explain, as clearly as I can, the nature and process of the operation. There is no doubt, but that a practical lesson is better than a printed one; yet, it is to be hoped, that this description will be sufficiently plain and intelligible, even to the least experienced florist.

In order to preserve the analogy, or natural affinity of each class, let the Bizarres be inoculated with Bizarres; Violets, or Bybloemen, with Bybloemen; and Roses, with Roses. Select, then, a fine breeder, or seedling Tulip, to try the experiment, and remove or draw off two or three of the antheræ, taking every other one, if you like; then, with a light and steady hand, remove three other antheræ (of course, one at a time,) from some variegated Tulip of the same class, and place or fix them, carefully and adroitly, upon the pointed tops of the filaments of the breeder, or seedling Tulip, from which you displaced the first three antheræ; to impregnate the breeder at the same time, slightly touch the stigma with the antheræ, before you fix them on the filaments; if the weather be calm, they will remain on four or five days before they wither and decay, and it should be done, for this reason, in calm weather; if the virus has taken effect, a bluish blotch, or stain, will be perceptible, running down the filaments to the germen.

Be careful not to cut down the stems of those you have inoculated, after they have done flowering, but leave them to wither and die down gradually.

In conclusion, I beg to observe, that I do not pronounce this plan infallible; because I have not yet had time to make the necessary experiments, to enable me either to establish the proof of its success, or to witness its failure; I, nevertheless, entertain strong hopes of a favourable result, and, in the mean time, invite all florists to give it a fair trial.

Another mode of inoculation, not generally known, was practised, with no inconsiderable share of success,

by Mr. Maddocks, Mr. Holmes, and Mr. Henry Brooks; to which last named gentleman, florists are indebted for this new and improved method. Their plan was, to make an incision in the stem of the breeder Tulip immediately below the cup, and to insert therein the stamina of the variegated one.

Since the above description and observations were written, I have received, from a friend in France, an account of another method of breaking Tulips, by a chemical preparation of compost, practised with great success, by Abbé Faucheux, a respectable clergyman and amateur florist, of Metz, on the suggestion of an eminent chemist. I have thought it my duty to present this, also, along with the other.

This valuable discovery was confided to Monsieur Pirolle, the author of "*L'Horticulteur Français, ou le Jardinier Amateur*," a work of great merit, published in 1824. Mr. Pirolle remarks, "Whatever communications I receive from Abbé Faucheux, one of our most experienced and distinguished cultivators, I can propose as rules and precepts, that may be depended upon." He also says, "It is with double pleasure that I make this secret known to the amateur, and the respectable name of the friend who has entrusted me with it."

The Abbé certifies, that, ever since he has used this mixture, which he has done for several years, his Tulips have grown vigorously, and have preserved their purity of colours; and that his seedling Tulips have invariably broken, or variegated, the seventh and eighth year, instead of the fifteenth, or twentieth; thus, adding, as it were, so many years to the life of a florist. He

sweetens and purifies the mould intended for Tulips, with pulverized quick lime, three months before he makes use of it, and turns it frequently.

After the bed is formed, he covers it with full three inches of the following composition, namely, one half of old lime plaster, or mortar, pounded, and sand; and the other half, of (*mâchefer*) iron-dross, also pounded, from the blacksmith's forge. " *Le mâchefer est une substance demi-vitrifiée, une espèce de scorie, qui se forme sur la forge des Marechaux,*" &c.—that is, the iron clinkers, or half vitrified ashes and slake from the smith's forge, or fire. He then digs this in, to the depth of nine or ten inches, and incorporates it well with the mould, three weeks or a month before planting.

To ascertain what effect this iron-dross has upon the bulbs, I have applied the flakes and slake that fly off in hammering, which must be of a stronger nature than the vitrified cinders, and scorious matter, from the forge. I have done this, by way of experiment, to prove its effect, and to satisfy my own inquiry, before the planting season arrives; I have the satisfaction of observing, that they are growing vigorously at present.

THOMAS HOGG.

Paddington, May 1st, 1827.

It remains for me now to say, how far I had put those experiments to the test, which I had so strongly recommended to others; I must, in truth, acknowledge at once, that any account which I can give, is imperfect, and unsatisfactory. A Mr. Lyde had the kindness to

send me two dozen breeders, for the purpose of trying the experiment; I operated upon several of them, in the manner described as above, and I found six of them to be broken in the year following. I then renewed the experiment, not only on Mr. Lyde's breeders, but on others which I had received from Mr. Clark. This took place on a fine still morning, in May; and, I confess, I entertained, at the moment, great hopes of a successful issue; unfortunately, towards night, a brisk wind arose, followed by rain, which dislodged and scattered the anthers in all directions, which we had adjusted and fixed on other stamens with so much care in the morning, thus rendering my labour vain! I never repeated the experiment afterwards, because, on reflection, I thought that Mr. Lyde's breeders might have broken simply from change of soil and situation. Experiments have, also, been made by others, but with no very sensible effect; one gentleman, it is true, after the first year's trial, expressed his satisfaction at the result; but, on repeating it the second year, his faith began to waver.

With respect to the impregnating a breeder Tulip, with the pollen of a broken or variegated one, and the inserting the anthers of the broken one on the stamens of the breeder, I did conceive it possible, that inoculation, in a slight degree, might take place; and that the virus, communicating with the sap, might, also, possibly descend to the new forming bulb, and by that means produce variegation in the cup or flower. I think so still.

Another method, which had been resorted to by some French florists, had, in the mean time, been communicated to me, and I immediately had recourse to it; but the trial was attended with no beneficial result. I took

the pains, also, to apply to a friend in Paris, to learn if he could assign any chemical reason for mixing mâchefer with the mould for Tulips; he only returned for answer, "That some of the soil, round Paris, was of so stiff and lamy a nature, that it required a portion of sand, or those ashes, to work it."

It is maintained by several, that variegation can neither be advanced nor retarded, but that Nature will take its own course; the idea, also, that variegation is the effect of disease, where no disease has ever been proved to exist, unless in the imagination of those who conceived it, is now utterly exploded. Experience, however, has shown, that variegation very frequently takes place after a change of soil, air, and situation; therefore, we have a right to conclude, that this is the most effectual and rational method, after all, to hasten and promote it. I here beg to remark, that the breeders I received from Mr. Clark, broke more freely with me the first and second year, than they have done since.

Mr. Strong, also, remarked, that his breeders broke in greater number, after he had removed to Brook Green; I am, also, of opinion, that it is owing to this change of soil and situation, that so many of Mr. Clark's breeders have broken in his lifetime; for it is well known how he has removed them from place to place, from Croydon to Dulwich, to Bromley, to Hampton, &c. and *vice versa*, and that many of his finest flowers have broke into colour in the gardens of his friends; one of whom has been silly and wiseacre enough to imagine, that he was entitled to as much merit, because they happened to break with him, as Mr. Clark was himself, who had saved and sown the seed, and raised the breeders! This is some-

thing like "the fool's fancying that he played the organ, when he only blew the bellows."

It has been justly remarked, that the Tulip fancy is yet in its infancy, and that the beauty and improvement of which it is capable, remains still to be developed, though it is so many years since the flower was first introduced into the gardens of Europe.

PROFESSOR BRADLEY ON TULIP-BREAKING, &c.

It is somewhere, I believe, about 256 years since the Tulip was first introduced into the gardens of Europe from Constantinople, which Linnæus named *Tulipa Gesneriana*, in honour of Conrade Gesner, a Swiss botanist and traveller; and though it is said to have been first discovered growing in its wild state in Cappadocia, in Asia Minor, we know very little of its early history, or of its colours, whether plain red, or purple, or variegated; or who the person was that introduced it; the Bizarre, or Tulip, with a yellow ground, was obtained many years after from seed; no doubt, a length of time would elapse before it could be increased to any extent by offsets; and those, necessarily, would be confined to few. The Dutch appear to have been amongst its earliest admirers and cultivators, and they were as much puzzled about its breaking 150 years ago, as we are at this day.

At that period, the breaking of a fine striped Tulip was considered as an occurrence of no small importance among the Dutch florists, who looked upon it as a piece of good luck, a happy event, which, like a prize in a modern lottery, was to make their fortune.

Richard Bradley, Professor of Botany to the Cam-

bridge University, little more than a century ago, and who wrote on gardening, gives the following account:—
 “Near Brussels, a man is famous for a little spot of ground, in which, by some strange virtue, (as is reported,) these breeding Tulips change themselves into fine variegated flowers; insomuch that their roots are brought thither from several parts, to be educated and brought up for the nicest collections, and money given for their standing; and that it is rare, if three in five, do not break into stripes the first year, after they are planted in that place; but it is afterwards related by him, that this plot of ground in two or three years got into disrepute.”
 He then proceeds to state, that he thinks this alteration may be accounted for from the sterility of the spot, the earth of which was nothing but common rubbish sifted, with not more than one-twentieth part of natural soil. In his time, Baguet primo Breeders, chiefly of a purplish colour, were obtained from Holland for five pounds a hundred, viz. Breeders, with strong high stems—from Baguette, a French word, meaning stem.

The patience of the florists of his time, like those of our own, was pretty severely tried, year after year, by the unvarying stubbornness of their breeders; now and then one broke, which was considered altogether a matter of chance, and which served only to tantalize and amuse them with vain hopes; mention, however, is made of four breaking one season, in a bed of breeders, in the garden of a Mr. Whitmill, at Hoxton; which is noted as a remarkable occurrence, calculated to revive their hopes, and allay disappointment; he takes advantage from the circumstance of their breaking near some pyramid Yew Trees, to argue, that their variegation was owing to the

poorness of the soil, the natural strength of which had been exhausted by the roots of the Yews. The plain, or self-colours, he supposes to proceed from a strength of nature, and that the variegations of all flowers are the effects of weakness, and want of nourishment; for that breeders alway grow more vigorously than broken flowers; and to continue the variegation of Tulips, it is necessary to take them out of the ground every year, as soon as they have done flowering; for if they were always to remain in the ground, he contends, they would, in time, become plain flowers again.

Many subsequent experiments have tended, notwithstanding, to prove, that poorness of soil will not effect this change; though it sometimes has happened, that variegation has taken place in it; and that the same has likewise happened in rich soils; therefore, in this respect, it seems altogether casual.

When seedling Tulips come white or yellow, no further change takes place; and it is very probable, that other colours, particularly dark red, will, in like manner, continue the same; if, therefore, a disposition to break is not inherent in the flower from the beginning, it will be in vain to expect it; it is some proof of the truth of this assertion, when I say, that a trial of twenty years with some breeders has produced no effect.

We know that Carnation seed will produce both striped and plain coloured flowers; and that the plain coloured, particularly red or clove, will remain so; violet and rose coloured breeders have been found, by experience, to break sooner than Bizarres.

After all, it appears, that we must still be content to struggle on against the slowness, the uncertainty, and the

difficulty attending the breaking of Tulips; and that the only rational method, deduced from the successful experience of others, which we can pursue with any hopes of advantage, is to give them a change of air, soil, and situation, ten or twenty miles distant one year, and then to take them back, and plant them in your own garden the next, and to continue this plan as long and as often as you can.

By doing this, Mr. Clark was enabled to break some hundreds in the course of fifteen years, out of which he selected one hundred at least, which he called his super-fine standard flowers.

It is dangerous, they say, to entrust gold to a miser, and a loaf to a hungry man; so, perhaps, it may be equally unsafe to entrust your breeders to a Tulip-fancier; carry them, and plant them yourself in the garden of some friend, who is plagued with no such fancy; and be at the pains, also, to take them up, and to fetch them home.

MR. STRONG'S CULTURE, SOIL, &c.

I have been induced to make mention here of the soil used by Mr. Strong, his mode of preparing it, time of planting, and other particulars, as far as they have come to my knowledge. As no one grows Tulips better than he does, or has had more practical experience, any account of his management, however imperfectly given, is deserving of attention. In the first place, he is an excellent judge of soil, and few people go to the expense, or take the trouble to obtain it, that he does. The beds in which his strongest and best Tulips are planted, are dug

in the usual way, two feet deep, and consist of good substantial loam dug upon his own premises, that has been prepared, turned, and sweetened, with all due care during the Summer; it is first broken down fine with the spade, and afterwards passed through a coarse sieve; he is no advocate for lime being mixed with it, which he contends only serves to impoverish the soil, and injure, if not destroy its nutritious and gaseous qualities; his beds are raised a full foot above the surface of the walks; whether he uses any manure or not with the loam, in the two feet below the surface, I cannot say, as I always forbear inquiry, whenever any reserve is shown, or any mystery affected; he begins to plant early in November, and generally contrives to finish, with all interruptions from the weather, by the middle of the month; from this time, till the middle of February, he exposes his beds of Tulips to all weathers, without any protection or covering. From the time the plants begin to pierce the ground, and make their appearance, his care commences, to save them from the ill effects of alternate and sudden frost and rain, of hail storms and rough winds, and of sunny days and frosty nights, when the leaves begin to hold water, and the flower-bud is liable to be frozen in the middle of it; then he begins to cover them by night; and having once begun, he makes it a rule to continue it; for occasional covering by night, at this season of the year, when the weather is so very variable and uncertain, he observes, is of little use; by this means he mostly preserves the leaves from being brown, cankered, and frost bitten; which, if attended with no other ill effect, has at least a very unsightly appearance. No flowers could possibly have flowered finer than Mr. Strong's have done, since

his residence at Brook Green, where he has every advantage of soil and situation.

SITUATIONS SUITABLE TO THE TULIP.

Tulips, beyond all doubt, like a warm and sheltered situation; they thrive better in a valley, than on a hill; the fertile vale of the Thames has always been considered favourable to their growth; in proof of which, I need only instance the well-known Tulip beds of Mr. Cheese, of Millbank; of Mr. Davey, of Chelsea; of Mr. Weltje, of Hammersmith; of Mr. Lawrence, of Hampton; of Mr. Brown, of Slough; and of Mr. Aiton, of Windsor; whose flowers, for some years past, have been remarked for the luxuriance of their foliage, and the largeness and beauty of their cups.

The tract of land, lying on the north or Middlesex side of the River Thames, extending from Pimlico to near Brentford, and bounded by the Great Western Road, exhibits an extremely rich, though various soil, which, in some parts, is light and sandy, in others, strong and loamy. This has been emphatically styled the garden of London; for it is from those portions of it, which are assigned to horticultural purposes, that it derives its immense supplies of the earliest vegetables, fruits, and other productions; as it branches off towards the hills, the soil in many parts becomes poor, shallow, and stubborn, upon a cold clay bottom, where neither fruits, nor vegetables, nor flowers, will repay the tiller's care without double the expense and labour; and the products even then are generally a fortnight or three

weeks later, than they are in the part I have just mentioned; this is a disadvantage which I have had to labour under myself, ever since I commenced florist; to say nothing of the smoky atmosphere, and the want of a brisker circulation of air in a confined London garden.

On the other hand, I have heard it asserted, that many of the Tulips, grown so luxuriantly by some of those florists, who live at the greater distance from town, will very frequently alter their character; a soft and delicate Rose Tulip will change to a harsh red; a bright scarlet-hued rose to a deep crimson; and those which are styled heavy, or blood-stained, to a dark cherry colour; others again have been forced into a rosy lilac; so that the most observant connoisseurs have been puzzled, at times, to know what flowers they were. The Tulips grown in this highly forced and luxuriant manner are unable to support it long together; they will go backward; the bulbs decrease in size, and seem to require rest, and change of air and soil, to recruit their wasted strength and constitution.

Again, both Mr. Davey, and Mr. Groom, have observed, that some new Tulips, which they purchased of Mr. Lawrence, of Hampton, when brought near town, and planted in their own gardens, if they have not degenerated, at least have never flowered since with those rich, bold, fine coloured cups, that they had, when they bought them.

On the other hand, two fine newly broke flowers, belonging to Mr. Groom, which he sent, one to Mr. Brown, of Slough, the other to Mr. Strong, to be planted, and grown by them, have been so much im-

proved by this change of situation, and flowered in so superior a style, that he no longer recognized his own flowers, when he beheld them.

The late Mr. Clark was so sensible of the advantages arising from a good situation and good soil, combined with skilful culture, that he was always more anxious that his new seedlings should be seen in Lawrence's garden, rather than in his own at Croydon.

*Prefatory Remarks on a Letter from W. CLARK, Esq.
of Croydon.*

I now claim the attention of my readers, while I submit to their careful perusal, a letter, which I received from Mr. Clark, in answer to some particular inquiries which I made respecting his mode of treating the Tulip; the information which it conveys, I consider very important and interesting, as it is founded on experience, and is the result of five and twenty years' unremitting attention to the culture of this flower, which he, like many others, esteemed the greatest ornament of the flower garden. Those persons who were intimately acquainted with Mr. Clark, who were aware of his correct taste, and nice discrimination, and who, also, knew his strict integrity, and the candour and openness with which he avowed his sentiments, will know that the utmost reliance may be placed in it.

The name of Clark being now associated with so many fine new flowers, is become familiar to most florists, who must be under the greatest obligations to him, for contributing so largely to their pleasure and amusement; neither will it easily pass away and be forgotten. Polyph-

mos, Shakspeare, and Miss Fanny Kemble, alone, will perpetuate his name. No florist had ever so much reason to rejoice, as he had, at the success which attended his labours.

I had intended to have given a list of the names of all Mr. Clark's Tulips, and the names of the several persons with whom they broke, with the prices affixed to each; but, as they have been lately sold and dispersed, I have abandoned the idea. From curiosity, I had been tempted to cast up all the separate prices, at per bulb, into one total sum, to ascertain what the whole came to; the reader would have been struck with its vast amount; and it must have operated as a powerful inducement to a young florist to follow his example, if either gain, or Tulips, or both, were objects of desire. Tulips, it is true, constitute a property liable to perish, if not taken care of; they are neither so durable as bricks and mortar, or timber, or land; yet, like other articles of taste and fancy, they are held in high estimation, and eagerly sought after by numbers.

Some of the Tulips were priced by him, at £10. £20. £30. £50. and £100. each, prices at once ridiculous and extravagant, especially for such as had been broke some years, and had produced offsets. Methinks I hear several of my readers exclaim, "I wonder if there are any purchasers who will give £50., or £100., for a single Tulip!" As far as my own personal knowledge goes, I confess, I am unable to satisfy them; I have my doubts as well as they; but I can very readily believe, that these amateur florists would not take less for a new broke flower. It is all very well to affix a very high price to a new flower, on its first appearance, to mark its quality,

and to attract attention ; but to ask, and to get, are two very different things ; — who are the purchasers ? This I know, for a certainty, without intending the least invidious allusion to any one, that I can always purchase flowers cheaper from a florist in the trade, than I can from one of those gentleman-amateurs. In the first place, they give you to understand, that they are doing you a favour to let you have the flowers at all ; and, in the next, that they cannot think of abating one penny of the price they ask, be it ever so high ; whereas, a man in trade, whose livelihood depends altogether upon it, is anxious to oblige, because it is his interest to do so ; and if he is a man of any character, he will, for the sake of that character, supply you with the true article required, and at the lowest price, for money. Credit is liable to a surcharge, and long or doubtful credit, very justly so.

It has become a very common practice with private growers, to sell and dispose of their surplus stock, either by private contract, or by public auction ; that is, by a root or two at a time, or by the sale of whole beds, planted and arranged for the purpose of sale. There can be no reason whatever why they should not dispose of them in this manner ; I find no fault with them on this occasion ; they are, unquestionably, as much entitled to do so, as any other person who sells the produce of his land, orchard, or garden. Mr. Clark, had he lived, would never have permitted any abridgment, or mutilation of his letter, even in those parts of it which do not immediately appertain to culture ; therefore, as it was written with the kindest and most friendly view to serve me, I do not feel myself justified in altering or suppressing any part of it ; but I give the whole as I received it. That his

confidence had been grossly abused by some, is very certain, though he makes mention of honourable exceptions; and what was equally provoking, some of his friends, to whom he was most attached, claimed, with as much vain assurance as ignorance, an equal share of merit. He was, moreover, tauntingly told by others, who were most anxious to obtain his new flowers, that they were in value not worth half so much; because, as his breeders were in so many persons' possession, some flowers might chance to break elsewhere, which would render them common; these things were a source of great vexation to him at the latter part of his life, and tended to sour a temper, naturally warm and sensitive of wrongs. He was never known, after these unpleasant occurrences, to part with any more of his breeders.

In another letter he writes, "I have been both injured and insulted in quarters where I least expected it; I have forgiven the treatment, but it is impossible to forget it."

He was a man of very upright and independent character, frank and sincere, and would receive no obligation from any one, which he thought he could not more than repay. The florists used to court him to view their Tulips, though they dreaded his severe criticism, as the "*sine quâ non*" of a clean bottom was his first consideration; the finest formed cups, and the brightest colours, had no charm in his estimation without it. Even Prometheus, and Harmodius, two of the highest coloured Roses grown, could not win his favour. He certainly carried this fastidious taste too far; for the time is not come yet, and, probably, may not for fifty years, when florists can afford to discard from their collections every Tulip, that may chance to have a slight blue or yellow

stain at the bottom of their cups; it would make an appalling reduction in the very best of them.

and the same, perhaps, would be the case

with the double flowers.

to state that, as I have

mentioned, I have

to Mr. THOMAS HOGG.

to Mr. HOGG,

DEAR SIR,

In answering the questions you have put concerning the Tulip, I shall begin with that, which relates to different sorts being produced from the same pod of seed; and speaking from much experience, I can say, most decidedly, (and I have supposed it to be generally known by all who have raised and bloomed Tulips from seed,) that the same pod, whether saved from a Bizarre, Bybloemen, or Rose, will not only produce all these, but different varieties; and whether the seed be saved from a broke, or a variegated flower, or a perfect breeder, the effect has hitherto been exactly the same throughout my experience; and this, I believe, has now extended to more than five and twenty years.

It has formerly been asserted, and seemingly with much confidence, that the seed saved from a broke flower is of little value, as it produces only weak and diminutive breeders; but this persuasion, probably, arose from a very limited experience; and though it may have so happened, a more extended trial has sufficiently proved, that seed so saved will produce breeders of equal strength, as the seed which is saved immediately from a breeder. Whether the seedlings saved from broke flowers have a greater tendency to break than those saved from a breeder,

is another consideration; and, perhaps, experiment has not yet gone to that extent which can satisfactorily determine the question; but this we know, that the Tulip, when it first blooms from seed, whether it be saved from a breeder, or a broke flower, will generally be of a self colour; yet it does often happen, that the seedling leaf, when saved from either, will be broke, and, of course, the first time it blooms it will produce a broke flower; so that it may be difficult to come to a right conclusion on this point, and to say what is the immediate cause of this effect, which seems to be so alike in both; still looking to probability, may it not be advisable to save seed from the finest broke flowers, as well as from breeders? And then, should science effect a surer process for breaking the Tulip, it will be easy to adopt the readier way.

During this somewhat lengthened period, it may be imagined, that I have raised a vast quantity of breeders; and such, indeed, is the fact; but it must not be supposed, that if a person saves seed, he is to expect that he will speedily obtain a great number of very fine breeders. No; the very reverse of this will be the case; and amongst a great quantity, when they come to bloom, he will find but few breeders worth preserving; that is, if he aspires to the raising of valuable flowers, for he cannot do this, unless the breeders have the finest properties, (the first of which I have always considered, and must still continue so to do, is a perfectly clean bottom, whether white or yellow, and without which all other properties are, to me, valueless,) with strength of stem, fine shaped cup, and of good colour; though there are many faint coloured breeders, particularly if they have a shade of purple in them, which will produce good flowers; but let

it not be thought, that the highest coloured Tulips were broke from faint coloured breeders.

In selecting the breeders, then, from the first bloom, it is quite useless to save such as have decidedly bad properties; that is, having a foul bottom, weak stem, with narrow, weak, and cat-sared petals, and, of course, forming a bad shaped cup, &c. Such can never produce flowers of any value; and, therefore, are not worth preserving; and further, if any one will profit by the advice, however selfish the principle may appear, let him not hesitate one moment, utterly to destroy such as he may deem not worth keeping, or more than he can himself plant, and be extremely cautious how he suffers his fine breeders to get into the possession of others; or he may, to his inexpressible regret, be subject to the basest deception and ingratitude; and this, too, from those in whom he had supposed he might place the greatest reliance; and be unblushingly told, that he had rendered his breeders of little value to himself, because he had, with too easy confidence, entrusted them to another; and because the same sort of breeder, which had produced him a flower of the first quality, might, also, be broke by another person; and, added to this, as if injury were insufficient, he may be insultingly told, that he can claim no merit for having raised the breeder; but, on the contrary, that it was due to him in whose possession the breeder was when it happened to break! Or, to top the climax of absurdity, that there is no more merit in raising the breeder, than there is in its breaking! as if the flower could have been produced, had the breeders not been raised; or that such breaking was any work of his. And, if more is wanting to dissuade any one from the

distribution of his breeders, he may find that it is sometimes attended with difficulty to get even a part of a breeder back again ; and if it should chance to break into a very superior flower, he may also find, that it is, in some instances, (but surely in few,) extremely difficult, even to get an offset of it ; or should such breaking be designedly kept from his knowledge, he will only meet with it under a borrowed name, and as the production of another's breeder. Such I know to have been the case ; but, it is to be hoped, it can be of unfrequent occurrence. Still the bird is safest in the hand ; and so if a person breaks his own breeders, he may exult at his own success, and distribute his stock, either for his pleasure or his profit, as fancy may dictate, or as he may find it expedient. But lest this censure should be misapplied, or wrongly taken, I am much pleased that I have it in my power to make some honourable exceptions, and to express my great satisfaction, by the fair return made from those, in whom I have placed, and still continue to do so, the most implicit reliance.

Of course, if any person sells, or makes a profit of his breeders, as with any thing else, he can have no further claim to them ; though, perhaps, the purchaser can have no more merit in getting fine flowers from them, than he can claim, who has been lucky enough to purchase a fine horse from the person who bred it, and reared it to his hands.

SOWING SEED.

Now, as to my method of sowing the seed, with this you were made acquainted some time since ; and, I must

confess, that I still see no reason to alter it, notwithstanding the comments upon it in Mr. Sweet's Florists' Guide, objecting to my practice of taking up the seedlings, after the decay of the grass from the first sowing; now although, perhaps, I ought to defer to Mr. Sweet's better judgment, yet, from my experience, I cannot help thinking that my method is the better one; and one reason for my so thinking is, because I deem it necessary that the Tulip ought to be taken up at the proper season, and well harvested; and, because, I believe, that the Tulip will increase in size the more from being so dried. Besides, by my practice of taking them up the first year, I have found some few of them bloom from the third time of planting, and a good number from the fourth; I, therefore, very much doubt, if, by any other method, they can be got to bloom earlier; and with this practice I have had the most decided success: yet, notwithstanding this, I, by no means, mean to say, that they may not be raised as well by sowing the seed in the Autumn, or as soon as it is ripe, and then left in the ground for two seasons, as the manner of some is, and as Mr. Sweet advises; but having succeeded, so completely, by sowing the seed the beginning of February, or a little earlier, as the season may be suited, (protecting it from the frost,) I have sought no other method. The consequence of leaving the bulbs in the ground, for a second season, will be too convincing of the error of this practice for any one to continue it a second time; and the injury which the bulbs generally receive, will be sufficiently apparent at the taking up, and, indeed, long previous to this, for the bad effect will be evident by the foliage getting cankered, (altho

first, they may appear to come up strong and clean,) and the stems will be shanked, occasioned, no doubt, from the old skins enveloping the bulb in a wet, mouldy, and half rotten state, so that instead of increasing the bulb it will be diminished in its growth; and, it is more than probable, that the effect of this may be seen in the succeeding bloom. This, therefore, is not only a slovenly, but very injurious practice; and if there is any exception to this it can only apply to the seedlings, in their earliest state, though, I still think, they ought to be treated in the same way.

And now, perhaps, it were as well to state here what has been my practice in saving the Tulip seed. From the beginning, then, I have saved seed from what I considered to be the finest breeders known, as well as from some of the finest broke flowers; and by thus selecting the finest breeders in succession, and saving the seed from such, for so many years, it will be easily accounted for, that I have raised a great variety of the finest breeders which have yet come under my observation, and from which a great number of very superior flowers, (if not, indeed, the finest,) have been produced, and must continue to be brought forward in succeeding seasons, from many persons who have got possession of the breeders by some means or other, as well as from those to whom they have been entrusted.

DIFFICULTY OF RAISING FINE BREEDERS.

It will be seen, then, that a new race of breeders are not to be obtained with so great facility as some seem to imagine; but that it must be a work of time, at least so

far as my experience goes; and yet, this is, unquestionably, the only way to get such flowers, as every one, whose laudable aim is to excel, must desire to obtain; and, although, by assiduity and perseverance, my expectations have been, in a great degree, realized, yet I still believe, that with the like perseverance, and, perhaps, a little discrimination, even if Nature is chiefly left to work in its own way, much more is yet to be accomplished in this pursuit; and particularly so, if art can be made the handmaid to Nature in this case; and that, by a proper impregnation with the finest flowers, colours may be produced, (as some affect to hold out to a great degree of certainty,) just as is most desirable, or as fancy may dictate! But though I am not entirely a convert to this opinion, still I should certainly advise the practice; and if it can be carried to any extent, it is past my finding out, or to conceive the point to which the Tulip fancy may reach, and that, too, in a very few years; but the mere contemplation of so great an excellence must be a sufficient stimulus for the persevering and strenuous exertions of every one, who is rightly employed in this truly fascinating, and, to many, very profitable pursuit. It may be truly said to be profitable, if a person can raise a Tulip, the stock of which is worth £20. to a £100. (speaking much within compass, as this has been, and is now done,) it is his own fault if he makes it not profitable. Yet not so with such as grow a bed of Tulips, (probably, under a very fine awning too, with the whitest calico stretched over the bed, surrounded with a fine gravel, or sandy walk, decorated with plants, &c.; and, perhaps, a large mirror, judiciously placed at the end of the bed;) and who can quietly sit himself down,

satisfied with very far less than a valuable collection, and to whom it is nearly a matter of indifference, (so that he has a foul Louis in his bed to boast of, which cost him so much,) whether his Tulips are of the first or any under-rate quality; and to whom it is also of little consequence, whether they possess that first and great quality, a perfectly clean bottom; so that he has a contrast in colours, or whether their bottoms be as foul as an unswept chimney! To such a person, if so, it must indeed be little less than a time-killing, and frivolous pursuit. To him a Tulip is a Tulip; and so is the case, in all probability, with his other flowers.

BREAKING OF TULIPS.

Then, as to the breaking of Tulips, as it is termed, or its becoming variegated from a self colour, what problem (as you express it) is there in this? Is not this (if it can be a problem) to be solved, by looking through Great Nature's work; for is it not the nature of the Tulip (so ordered by the great Designer) to break from a self into variegated colours? And what is there in this to excite our surprize, more than we see in numberless other plants, in which the working of Nature is equally hidden, even from the most scientific inquirer? To attempt, therefore, to account for such breaking, by supposing it to be occasioned by disease, is surely much worse than idle, and can only impose upon the unreflecting mind. Such a view of Nature's works can only be calculated to detract from that power, which created and stamped the character of all things; and to affect to depreciate that power, by attributing design to accident, or mere chance, will neither

lessen our impious presumption, nor at all administer to the exaltation or scope of our understanding.

As to any chemical or other preparation to further this breaking of the Tulip, to any degree of certainty, as some have pretended, (though I am acquainted with many of such quackeries,) I believe a great deal of this to be mere fudge; and that the most ready way to effect this process of Nature, is not only a change of soil, but more particularly a change of climate and situation; and the only difficulty of promoting this object, is to avoid the unpleasant consequences, which too often arise from a credulous and misplaced confidence. What merit, then, with any show of reason, can be ascribed to any person, because a Tulip happens to have been broke in his garden, having been merely planted there by his friend's sufferance? And would it not have broke just the same, (for its character cannot be altered,) even if it had been planted in the humblest cottage garden of the poorest old woman by the side of a common? Is it not then a paltry assumption, particularly when the detection is so very easy, for any person to pride himself on the mere breaking of the Tulip, which he had been suffered to plant in his garden, and which every one, who is at all acquainted with its nature, must know, that it is, in a great measure, a matter of chance; and, as before observed, is to be effected more by the mere change of the bulb from one distant situation to another, (and where, of course, there is a change of soil,) than to any other circumstance? If this were not so, and there could be found some preparation to insure this breaking of the Tulip, which I do not believe, I do not know that I would give one straw to be made acquainted with the secret; as every season

now produces fine flowers ; and to me there is more pleasure in the anticipation of this, than if it could be proved to be reduced to a certainty, and the change made to take place at a given time. And yet, because having had the breeder placed in confidence in his hands, or, as has been the case in several instances, got it by means which he dare not avow, he is not ashamed to appear under his borrowed plumes, and palm it upon the public ; his Lord A., or his Lady B., when he has had no more to do with raising the breeder, so broke, than he had in the making of his own head ! And if he had not the breeder, how could he have broke the Tulip, as he chooses to assume ! By what title then can he, with any propriety, call it his ; or what possible right can he have even to name the flower as of his production ? First, then, let him, by his own exertions, raise the breeder, and then will the Fancy rightly give him credit for raising the flower ; but, till then, he only pompously struts in another's clothing, like the daw in the dove-cot ; or, pirate like, does but sail under false colours.

PRESERVATION OF THE BULBS.

When a fine collection has been obtained, whether by raising, and the breaking of breeders, or by purchasing the first-rate flowers from different collections, at a very considerable expense, it will, perhaps, be no unimportant consideration, as to which is the most likely method of preserving the bulbs in a sound state, when so obtained. With this view, then, from long experience, I have no hesitation in saying, that I believe much depends on well harvesting the bulbs when they are taken up ; for, unless

they are sufficiently exposed to a free current of air in a room, and well dried before they are more secluded from such air, (though, at no time, from the taking up the bulbs, to the time of planting them, should they be closely shut up in boxes, so that the air cannot pass freely to them,) it is much to be feared, they will contract a mouldiness between the coats of the bulb; and, from this cause, it is more than probable, many suspicions, derogatory to some person or another, have been unjustly entertained, by its being supposed, that some malevolence had been practised, or some trick played them; when the greater probability is, that the injury has been sustained when the bulbs were closely shut up in their own boxes; for there is little doubt, when this is the case, though the injury is, perhaps, in a great measure, concealed, without closely examining the bulb at the time of planting, to see if there are any cankered spots on the outer coat, or any discolouration, either at the apex or other part of the bulb; if there be such, there is no alternative but to cut it clean out; for, if planted in that state, although it may appear to vegetate and come up very well, yet the old bulb will decay before another can be formed, and, of course, the whole will be lost. To this cause, I can have no doubt, must be attributed, at least in a great measure, the loss of many of the most valuable Tulips. Besides the loss proceeding immediately from the above cause, I am but too clearly convinced (because I have myself acted in direct opposition to my own conviction, though I trust from no unworthy motive,) that many of the finest Tulips have been entirely lost, from an overweening propensity to keep them; for, if when a bulb is taken up, instead of appearing firm and well formed, or, as it is

said, "as sound as an acorn," but, on the contrary, has much diminished in size, and become soft or spongy, and ill formed, there can be no question, but that the right way is to get a friend to plant it in a somewhat distant situation ; where, if the bulb is not too far gone to decay; it will generally acquire a healthy state, and come up sound. But the misfortune is, we are too loth to part with the most valuable flower, perhaps, in our collection, (and, indeed, it cannot be said but that such a feeling is natural enough,) and so we keep it, till it is lost to ourselves, and to every one else ; and then we have the unquiet and unceasing regret, which must ever be the consequence of our too great anxiety to keep it ; supposing it may not be attributable to another motive, not quite so easily reconciled, that of a selfish and unworthy principle, arising from being enabled to say, (as it is said has been the case in more instances than one,) that the flower is in no other collection. Where profit alone is the object to be looked to, a man cannot be blamed for wishing to keep the flower in his own possession, till he has accomplished that object, by making the most of his flower ; but it is otherwise, when the loss happens from the mere vanity (or something like it) of keeping the flower only in his own collection.

It is true, that a bulb, so appearing to diminish, may sometimes be recovered by planting it in the garden, where it may have a free circulation of air, or, under a wall, at the distance from it, of about six inches, in a south east aspect, perhaps, and there left entirely exposed to the weather. But the most sure way, is, as before observed, to send the bulb to a rather distant situation, where it may have a very different air, as well as soil ;

and had many of us have done this, we should not now have to deplore the entire loss of flowers of the greatest value. The best excuse for our omitting to do this, is, that some of our friends are a little too scrupulous in this matter, and feel too great a delicacy in undertaking the care of the bulb; and, besides this, it is, perhaps, difficult to make up our minds to put out of the bed the finest Tulip in our possession, even for one season, and placing it where we have every reason to suppose it would be safe; though it is morally certain, that, if we continue to plant it in our own bed, it will be inevitably lost. To say that no person can be found in whom our confidence may be safely reposed for such a purpose, (though a case or two may have happened which may not be quite in unison with good faith,) is a sort of libel, not only upon our immediate friends, but upon all those who amuse themselves in this pleasurable fancy. This is very different from putting out the breeders; for, as to them, there will always be found a sufficient number of friends who will very readily promise strictly to comply with the conditions on which they receive them, but may not be so willing to return, even a part of them, when so desired.

The change, too, of the Tulips, which are in health, (and this, I believe, holds good with all plants applicable to our climate, as well as seeds, even down to the cabbage plant,) cannot fail to have shown how great the benefit which is to be derived from such change; for when a bulb is obtained from a distance, in a healthy state, its more free or luxuriant growth will hardly escape observation. Where then a change of sorts can be effected occasionally, with mutual confidence, bulb for bulb, in a

sound condition, there will, very generally, need no other demonstration of the utility of such a practice than will be evinced by the superior growth of the flower: yet, notwithstanding this, where there is a sufficiency of bulbs, and the bed can be partially changed, as occasion may require from the outer beds, (for there will generally be found some bulbs that have not made a good progress in their growth,) such change will, probably, answer the purpose, in a great degree, and keep the bulbs in health for a series of seasons; but still the efficacy of a distant change is nevertheless advisable at times, particularly if it is seen that there is any tendency in the bulbs to recede from their wonted healthy state.

TIME OF TAKING UP.

The proper time of taking up the Tulip, after the bloom, depends upon the state of the foliage, and this will begin to decay much sooner with some than others, consequently it is requisite that the time of taking them up should vary accordingly. As soon then as the foliage gets yellow, and the top of the stem is purple and shrivelled, some distance down, this is sufficient to shew that it is time the bulb should be taken up, and not left, as has been advised, till the stem has nearly withered away. By taking up the bulbs, at an earlier period, they will be more likely to be fine the succeeding bloom, than when left in the ground till the stems are nearly decayed; and whenever the foliage of the Tulip dies off more early than usual, after the bloom, it is a sure indication that the bulb will make no more growth, and that something is wrong; and, therefore, the sooner it is taken up the

better, and then put in the boxes, where air may be freely admitted.

PURCHASE OF TULIPS.

In the purchase of Tulips from different collections, though there may have been some trickery practised by the seller, in some few instances, (but of this I will not speak from my own experience,) it ought to be known, that too often unpleasant misgivings have arisen in the minds of many, one towards another, as to their having got the identical bulb which they had so purchased, when it has happened, that the flower, in the following season, has not answered their high raised expectations; and, because, having selected the bulb while in bloom, and when, according to their judgment, it was blooming in the highest state of perfection, it was, when bloomed by them, any thing but an acquisition to their bed. Now, every one who has been in the habit of growing Tulips, cannot but know, that this change does take place, more or less, almost every season; and it must have come under his observation in his own collection, that a bulb which may bloom, in the greatest perfection one season, may, in the next, be extremely indifferent, or altogether bad. It is, also, quite as evident, that this is an occurrence more peculiar to some Tulips than to others, and those too, of the most valuable description. It is, therefore, too much to say, that because a Tulip, which he had purchased while blooming in great perfection, does not bloom fine in his own bed the following season, it, therefore, necessarily follows that he had been imposed upon, and has had another instead of the one he had selected.

In such cases, then, it is quite clear, we may do the greatest injustice to the most honourable men, by entertaining a mean and unfounded suspicion of their probity, on this head ; when, it is equally evident, that the bulb may have naturally undergone such a change, although in a way which we cannot comprehend ; or, by our own mismanagement in having planted it in a soil not quite so congenial to its nature, as that in which it grew at the time the purchase was made ; and, besides this, it should also be considered, that when a Tulip blooms so extremely fine in any one season, it ought not reasonably to be expected that it can, or will continue to do so, because experience must have shewn that such expectation is at variance with the fact. Whether this is occasioned by exhaustion of the bulb when it blooms so exquisitely fine, or any other cause, it may be in vain to offer any opinion ; and, perhaps, we can only regret that our experience compels us to say, that something of the kind does take place to occasion so great a change. The breaking of the Tulip, also, from the breeder, seems equally as abstruse ; and we only know, that when it breaks, it is generally of a less vigorous growth, and that the bulb is naturally formed of a less size, as one is very generally in proportion to the other ; and that it may require a season or two before it will attain to its usual luxuriance, as, when in the breeder state, (if it ever does do so,) while in others, the plant may grow luxuriantly at the time of breaking, and, of course, will form a large bulb. Why this is so, is, perhaps, beyond our comprehension. Is not this, then, a further and cogent reason for suppressing a too hastily formed opinion, (more especially, when it is calculated to operate to the injury of

another,) without sufficient grounds for the accusation, we may, in our disappointment, be induced to make, when a flower does not bloom in that state which we think we have a right to expect; and convince us, that, however strong our opinion may be, we may, in our judgment, be extremely incorrect, and very far wide of the truth. It may, probably, be said, that such a conviction may give a great scope to fraud, and that nothing can be more easy; if any one is so inclined, than to change the bulb; and then, under the cover of such a natural change in the Tulip bloom, he may impose with facility, and with much show of probability escape detection. But, then, where there is any just cause for suspicion, let the purchaser use only a due degree of caution, and not leave that to another which he ought to attend to himself, and see the bulb taken up. Where this is not done, and a bulb of quite a different Tulip to the one purchased, gets, by some means, into a collection, it can only be accounted for, (at least, in a right way,) by supposing that some mistake has been made in some way or other; and here, unquestionably, such a mistake ought invariably to be set right by the seller, in the best manner possible—that is, to exchange the bulb for the one bought, or one like it; and even with this the amateur will be but ill-compensated for the vexatious disappointment he has experienced in his bloom, by the loss of a fine flower; and if any hesitation is made in the furtherance of this object, whether the mistake has occurred, either by sale, or a mutual exchange, it is for the general benefit that such a person should be openly and entirely discountenanced, and the transaction be made of general notoriety.

To prevent, therefore, any such mischievous occur-

rences, or even the suspicion of such, it were certainly the better way for every seller of Tulips, to insist that the buyer should himself see the bulb, which he had selected, taken up, wherever it is practicable; and if this were so, he that sells, cannot, in any way, be accountable for the blooming of the bulb, but the purchaser must then take it at a risk of its again blooming so fine as he might expect; for no man, knowing the liability of the Tulip to go back, as it is termed, or to approach too nearly the breeder colour, can at all warrant that it will continue to bloom in a fine state, even for the following season. If, therefore, any one does not see the bulb, which he had selected, taken up, he must take it at a venture; and we may hope, that, on the good faith of him who sells it, he may very generally rely; but, should any imposition be practised upon him, let it be supposed that such will be of rare occurrence, and that the seller may not even be liable to the risk of incurring unjust suspicion, wherever it can be done, he will require the attendance of the purchaser, or his agent, that the bulb may be taken up in his presence. In purchasing a bulb from the Continent, or elsewhere, the risk must be encountered of having that which is desired, because there can be no question, but that there are Tulips imported exactly under the same names, and yet of different qualities, the character, too, being so near as to be deemed by some to be of the same stock, although it is probable it may not have been broke from the same stock of breeders. If the bulb is warranted to be right, as is the case with some respectable houses, the risk is, in some measure, not without a remedy; but it is very difficult for any one to say, that, because the bulb does not bloom

well, (supposing its proper character to be ascertained,) that, therefore, the bulb is not right.

NAMES OF PARTICULAR TULIPS.

With respect to the different names of Tulips, of the same or similar character—when any one has a flower broke from his own breeders, he will, of course, give it a name, in order that it may be distinguished from others ; and when the same sort of breeders have got abroad, by some means or other, and are broke in another place, vanity, or, perhaps, something else, seems to be an inducement to some persons to give it a different name, and thus much confusion in names has been, and is likely to be the consequence of it.

But, in other cases, where there is a sufficient distinction in the flowers, I know of no other way to distinguish one from another, but to give them different names, though there may be, and, certainly, are a number of Tulips which bear so great a resemblance to each other, as to induce some to think they have been produced from the very same breeder ; but of this I certainly have great doubt, because, in my own experience, I have seen, that, in saving seed, breeders will be obtained so very near alike, that one cannot be well known from another ; and yet they will break differently, although of the same character, and may clearly be selected, the one from the other, when so broke ; and this fully convinces me that the same thing happens with others, whether at home or abroad ; and so it may, probably, be accounted for, that we have had, in some instances, one flower instead of another, having been broke from similar breeders, and,

consequently, producing flowers of nearly the same character.

It seems to be the custom with some, when a Tulip blooms in a very high state of perfection, to say, and to make us believe if they can, that it is of a different strain to others of the same kind, when, perhaps, there is no more difference than the usual change from bad to good ; and so on the contrary ; and, perhaps, it often happens to answer the purpose of the seller, because he generally enhances the price in proportion to its fineness ; though there are, certainly, some bulbs of the same sort more constant in blooming fine than others, and are, consequently, of more value. Many sorts of Tulips might be particularized, and contra-distinguished, as of the Charbonnier, Catafalque, Trafalgar, (Davey's,) Nigrorum, &c. &c. to a considerable extent ; and, besides this, the seedlings saved from such, in some instances, have much resemblance, although different ; so that there appears to be no alternative but to give them different names, when there is a marked difference in the flowers ; or how else can we know them one from another ? A purchaser will then do well to select only such bulbs as he is convinced bloom rightly, (coming under his own observation,) and not run a double risk, by buying a flower not blooming in its character, for there will always be risk enough in having a fine bloom, even from a bulb that we have seen to bloom right, because of its great tendency to change from some cause ; though, at the same time, we know well, that a bulb, blooming badly, in one season, is not a sufficient criterion for the following bloom, particularly with some sorts ; but that it may, and often does bloom fine the following season. Still there is a diffi-

culty, when the bulb does not bloom fine, in coming to the conclusion, that the bulb is right; and, therefore, a fine bloom will always be of the most value, and will, generally, I suppose, be chosen in preference.

PLANTING.

It has been said, (though, perhaps, of such a person, and in such a presence, we ought to speak with all due deference,) that when he could not swim, he found great fault with the water! And this, probably, in taking one cause for another, will not be very inappropriate; at least, in many instances, to the Tulip grower, &c. who, not satisfied with the several and sufficient directions, which have already been given for growing this flower, must yet have a number of different schemes, different soils, &c. which a very little reflection, if not experience, might show the impropriety of attempting; and then, failing in their bloom, they readily attribute the cause of it to the inclement, or other situation, in which they are most unfortunately placed, or to some other of a like plausible nature; when, in all probability, it is much more often owing to some improper management, either as to soil, planting, &c. or by wishing to “out Herod, Herod,” some imagined superior method of their own contriving is adopted, and the failure in the bloom is the consequence. Not but that, it must be conceded, there is a great difference as to situation; for if the bed be planted in a confined space, surrounded with noxious effluvia, as is often the case in populous places, it can hardly be expected that the flowers will bloom in an equal degree of excellence, as when grown in an open situation,

and in a more pure and free air ; at the same time, perhaps, we may not be quite so right in attributing a bad bloom to the mere coldness of situation, as some have alledged, though it is, unquestionably, a fact, that Tulips will bloom a week or ten days, (or even more) earlier, in some places, than in others ; and this within a distance of ten or fifteen miles. But though they may be later in their bloom than others differently situated, it is, I think, by no means so certain that they will not bloom so well, supposing that there is nothing more to prevent it than the mere situation.

FORMATION OF THE BED, POSITION, SOIL, &c.

As to the bed, where an election can be made, let it be placed in an open, airy situation ; and if an aspect is only a matter of choice, shall we not be right in advising that the bed should lie as near north and south as may be found convenient, in order that the sun may have a similar power on each side of the bed ? Whether the bed is to be confined in a raised box at the time of planting, and so remain ; or whether it is better to raise the bed as usual, and not put the boards to the sides till the Spring. On this point there is certainly some difference of opinion, some thinking that the Winter rains drain better away from the bed without the boards ; but, after all, it is not, perhaps, of such very great consequence which method is pursued, as both have answered the purpose, and the Tulips bloomed equally well under both circumstances. In this matter, therefore, doubtless an option may be given. And as to the soil in which to grow them, in this, too, it must have been seen, there may be some latitude

given with reference to the particular sorts which may be used, with good effect, for this purpose; and that a change, occasionally from different places, may be resorted to with good advantage. But there can scarcely be a greater mistake than to use any poor soil, with a view, as some have supposed, of getting the bloom fine or light of colours; for experience has shown, that it will have quite a contrary effect; for if the Tulip be not well grown, it will hardly bloom in its proper character, and the colours will be faint and imperfect. As to sand, or clay, or any intermediate soil, probably, taken from a common, where the water has been stagnant upon it, and where it is imbued with ferruginous matter, or iron mould, as it is commonly called; such cannot be at all suited; though, under the idea that it is fresh or maiden mould, as it is deemed, it has been inconsiderately used, and more injury has been done to the bulbs by it, than a year or two, with good management, could remedy.

To state, then, what is a proper soil, I should say, I cannot suppose that there is any better than that which is ploughed out in furrows from a rich old meadow, where the grass grows luxuriantly, upon a sound loamy soil, not too adhesive, but such as may be passed through a sieve or screen, after it has been laid up in a hill for a year or two, (and turning it occasionally,) or until the turf has become rotten, and is reduced to a mould. This having been frequently turned, and well sweetened, for two or three months previous to using it, will, I believe, be found to be as proper as any other that can be selected for the Tulip, and for any other purposes; but if such cannot be had, a headland, from under grass, or otherwise, and of a similar soil, which has been well manured,

and from which a crop has been taken, this may, also, be selected, and treated in the same way, with the best prospect of blooming the Tulips fine. But wherever a soil of this description can be found, where it has been well manured, and from which a crop has been taken, when, of course, the manure will be, in a great degree, decomposed; of two extremes of richness and sterility of soil, let it be supposed that the latter is the greater evil, and, consequently, to be most avoided. On the contrary, by having the soil too rich, many Tulips, of the strongest colours, may become foul, or have too much colorific matter in them, so as to produce an imperfect colour, or if not immediately so, there seems to be little doubt but that there is a great tendency to it. And so, if Tulips are grown to a very great degree of strength, from different causes, probably, as a rich soil, pure air, &c. it will, I believe, be found, that such great strength cannot be supported for any duration of seasons, particularly by the same bulbs, and that generally such extraordinary strength will ultimately prove to be the exhaustion of the bulb. A strong, but moderate growth, therefore, would seem to be the most desirable; for, as by the greater strength, the bloom may be rendered coarse, and the bulbs generate decay; so by having them too weak, a fine bloom may not be reasonably expected; and in addition to this, when the bulb is weakly formed, it is not to be supposed that any good increase can be produced by offsets from them; and with some sorts, even, when fine bulbs, much increase from such is not to be looked for; much less then may we hope for increase, when the bulbs are in a weak and declining condition. With such a soil, therefore, as is recommended, and with such management, the

had may be proceeded with; and when the situation is fixed upon, and the earth dug out to the depth of about twenty-seven or thirty-inches, (for it is rather too much to say that any very great nicety is required as to this,) the bottom may be lightened up with the spade, if thought necessary, and then part of the fresh earth, or other good earth, of a similar quality, or both mixed, may then be put to it, so that when well settled it may be about eighteen inches from the top of the boards, and upon this, a stratum of quite rotten dung may be laid; (horse droppings from the road, or otherwise, so that it is well rotten,) if cow dung be used, it ought to be quite decomposed, and used sparingly; about two inches thick of this may be spudded in, and upon it may be laid the fresh loam, well prepared, for the bulbs immediately to grow in, nearly or quite to the top of the bed, because the earth will sink, probably, low enough for planting the bulbs upon it. The reason for placing the dung so low, is, that the fibres may get down to it, (which they will do,) and that the bulbs may not be injured by it. If any objection should be raised against this method, (as some will affect, at least, to know better than others,) I can only say that I know this practice has been attended with the best success. The bed should be thus made a fortnight or three weeks before the time of planting the bulbs, that the earth may be sufficiently settled, so as not to sink much afterwards.

As to the time and manner of planting the bulbs, there is, also, some difference of opinion, though there can hardly be any sufficient reason for attending so very minutely to either, as some will hold out; and, probably, there is more of apparent knowledge used in this, or a

wish to make it appear, that one plan is much preferable to another, (when the difference may be about as material to the growth of the Tulip, as it may be to some persons, which shoe they may pull on first, or as to the particular hour of the day on which the bulbs are planted; while each method, if not in opposition to obvious conclusion, may equally answer the purpose. With respect to the time of planting the bulbs; either quite the latter end of October, or the first or second week in November, as the weather may happen to suit, may be the most proper time, as the appearance of the foliage from the bulbs would seem to indicate, though some are much more earlier in this respect than others. And if deferred to a later period, it appears, as if Nature were counteracted by keeping the bulbs in the boxes, when they are in a state which evidently shews, that their growth is protracted by being kept out of the ground. That the bulbs are benefitted by being so kept from the ground, to a much longer period, or that they will not come up so soon in consequence, and thereby not be exposed to the frost quite so early, as some have supposed, is an opinion, as I believe, much more easily given than can be proved to have any valid foundation. As to the method of planting the bulbs, there are different plans pretty well known; and, perhaps, it is of no very great consequence which method is pursued, provided that no whimsical departure from the common modes of doing this is attempted.

To the use of sand, to set the bulb upon, I am aware, that to this, some have raised an objection, but I am persuaded, that about a small spoonful of clean drift sand, or river grit, is congenial to the bulb, and, therefore, recommend, that the bulb be set upon the sand, and

partly enveloped in it. But to sea sand, unless it has been well washed in fresh water, I cannot but object; for when used, as taken from the sea, it is to be feared that the bulbs will derive no benefit from such; but, on the contrary, it may occasion injury.

And if the bulbs are covered with good mould, to the depth of about three inches from the top of the bulb, on the sides of the bed, and about four inches in the middle, leaving the bed sufficiently rounding in the middle. Let it ever be kept in mind, that the mould, for covering the bulbs, should be of a sound and good quality, or partly the same as that immediately below them; and that this should be frequently and well turned, that it may be made perfectly sweet by being exposed to the sun and air. There is much more in this than may at the first glance seem to call for any great consideration; for unless each soil be so rendered sweet, the foliage will be cankered, and the stems shanked. The consequence of which, some may have wished, that they were not quite so well acquainted. By following those instructions, I do not know but that it may very safely be said, they have been properly deposited, and so left with a fair and reasonable hope of success.

SPRING COVERING.

Relative to the time of covering the Tulips in the Spring, in this there may be some difference of opinion; but I am not aware that there are any good grounds for a departure from the practice of the older, and, perhaps, some of the best growers of this flower; and their method is known to be, to cover the bed, with good single garden

mats, upon hoops, or otherwise, about the time the Tulips are nearly, or quite all shewing above the ground, whether the season be later or earlier, and not before : considering that the bed, from the time of planting till this period, should be entirely exposed to all weather, and that the bulbs sustain no injury from this ; or if they should, in some immaterial degree, they are the more benefitted by the free exposure to the air.

NO RAIN AFTER FLOWERING.

As to admitting rain, after the Tulips have been covered, on this there may be a diversity of opinion ; but the propriety of doing this, may, as I am inclined to believe, depend much upon the quantity of rain falling since they were planted, and immediately previous to their being covered ; for should there have fallen very little rain before this, is it not probable that they may become too dry before the blooming season, so as to require more moisture to carry them well through their bloom ? But then, this, too, may depend, in some measure, upon the soil, in which they are planted, whether of a lighter or stronger consistency ; but whenever there is an appearance, indicative of a want of moisture, and that the Tulips do not continue to make such progress in a free growth, or look so well as we could desire, why should there be any hesitation in giving such moisture, either by rain, in mild weather, (but never when frost may be expected,) or by watering just within side the boards around the bed ; or, perhaps, it might not be a bad expedient if the water were given under the bottom of the boards, and beneath the bulbs, at any time, if such watering

should be found necessary previous to the bloom. But after the bloom, to give water, by any means, with a view of swelling off the bulbs, though this may have been recommended by one who had had some hand in "setting the Thames on fire," yet none but those equally clever, will, I suppose, be induced to adopt such a practice; and the more experienced will hardly be so much in lack of intelligence as to follow such advice; for, in so doing, what may be expected, but, that though the bulbs may appear the larger when taken up, they will, doubtless, have imbibed so much moisture, that the good harvesting of them will be attended with the greater uncertainty, and they will be much more liable to contract a mouldiness between the coats, and thus occasion the disease, which has, as, I believe, in more instances than one, been the prevailing cause of the loss of numerous valuable Tulips. Contrary to such management, then, who, that has had any experience in this pursuit, will not take especial care, after the bloom, to keep the bed as dry as possible, that the bulbs may be well ripened for their harvest, and to give the bed all the sun and air, whenever the weather is fair and will admit of it, directly for the purpose of drying the bulbs. Let such a scheme, then, as that of watering the bed, after the bloom, in order to swell off the bulbs, be left to the practice of those, only, whose credulity may be about equal to such inconsistency.

If the bed is suffered to receive the rain, once or twice, in a moderate quantity, after having been covered, too much attention cannot be given to see that the matting is not put too closely over the Tulips while the foliage is wet, for if shut up closely when in a wet state, and a

frost succeeds, there is much bad effect to be apprehended from it; and if the bed is watered, the air should never be excluded from it, (any more than must necessarily be,) by having the matting shut down close on the sides and ends of the bed; for too much light and air, at all times, cannot be given (without which the bulbs cannot get on well,) if the weather will admit of it; that is, if the wind is not too high, so as to break the foliage, which has not only a very unsightly appearance, but is also injurious; or if there are no hail storms likely to occur, or no frost; when they are expected, there is no alternative but the bed must be covered in the best manner so as to protect the foliage. When the Tulip is so forward as to throw open its leaves, and up to the time the bloom makes its appearance, the rain may then be held in the heart of them; and if frost should succeed, ice will be formed, and this will be attended with much injury to the bloom: should it happen, then, that the rain water be so held in the leaves, a common syringe may be used to draw it out. In any prospect of a frost, however, no rain should be admitted.

After the bloom is pretty far advanced, it too often happens that severe frosts will prevail, and to so great a degree, that even when an extra or double mat is had recourse to, during the night, particularly about the time the plum blossoms, the foliage being tender from having been covered, will be so frozen as to shew the effect of it, even to the time of blooming, though some much more so than others; and whenever this frost happens with such severity, the effect, in the flower, will be too evident to escape notice, particularly in the three outer petals; these being so affected by the frost, that they become

contracted, more or less, so that the colours which should rise between the lamina of the petals cannot get to its proper place, so as to form its exquisite, beautiful, and regular pencilling; and, of course, the petals are irregularly formed, and defective in their colour. Now to prevent this, particularly in low situations, where the frost takes the greater effect, it is very difficult to point out, because this injury may be done, in part, at an early growth of the bloom, by repeated frosts, and when it is not advisable to cover too closely, except when a severe frost is nearly certain; yet the greater hurt which is sustained when the bloom is getting forward, and which generally happens from the last two or three sharp frosty nights, may, in some measure, be guarded against by a closer covering; though, even with this precaution, such an effect cannot wholly be prevented. It only remains then for us to do the best we can; and although the bloom may not be all we wish, there will be still sufficient beauty to compensate us largely for all the trouble we may have taken; and so we may do well to submit to our little disappointment, with patient and humble resignation, and look forward with hope, to escape a similar evil in a future bloom.

Your's, very truly,

WILLIAM CLARK.

TULIP SHOW.

Tulips, exhibited, at these shows, are, in general, classed and distinguished as follows:—Flamed Bizarres, Feathered Bizarres, Flamed Bybloemens, Feathered

Bybloemens, Flamed Roses, Feathered Roses, and Selfs, or plain coloured.

Having been applied to, not long since, by the Secretary of a Tulip Society, which had been just formed, for a definition, or description of them, whereby they might be distinguished, I sent the following:—

A Bizarre Tulip has a yellow ground, marked with purple or scarlet of different shades; it is called flamed, when a broad irregular stripe runs up the middle of the petals, with short abrupt projecting points, branching out on each side; fine narrow lines, called arched and ribbed, often extend, also, from this broad stripe to the extremity of the leaves; the colour generally appearing strongest in the inside petals; a Tulip with this broad coloured stripe, which is sometimes called beamed, or splashed, is, at the same time, frequently feathered also.

It is called feathered, when it is without this broad stripe; but yet it may have some narrow lines, joined or detached, running up the centre of the leaf, sometimes branching out and curved towards the top, and, sometimes, without any spot or line at all, the petals are feathered, more or less, round the edges, or margin, inside and out; the pencilling, or feathering, is heavy, or broad, in some, and light or narrow in others; sometimes with breaks, or gaps, and sometimes close, and continued all round.

A Bybloemen Tulip has a white ground, lined, marked, striped, or variegated with violet or purple, only of various shades; and whether feathered, or flamed, is distinguished by the same characters and marks which I have pointed out, and applied to the Bizarred Tulips.

A Rose Tulip is marked, or variegated with rose,

scarlet, crimson, or cherry colour, on a white ground; and the Feathered Rose is to be distinguished from the Flamed by the same rules, as described before; the Rose is very often both feathered and flamed.

A Self or Plain coloured Tulip, properly so called, is either white or yellow, which admit of no further change; other plain coloured Tulips, whether red or purple, are called breeders, and are hardly worthy of being exhibited.

CULTIVATION OF TULIPS.

The cultivation of Tulips, to many, is one of the most pleasing and fascinating pursuits imaginable; and though it is generally represented as a very expensive one, such an opinion is far from being founded in fact; good Tulips are now sufficiently numerous, and their value is reduced in consequence. During the late war, when the sources of supply were fewer, and those frequently cut off altogether, it is true, high prices were kept up; but I have no hesitation in saying, that £100. judiciously expended, at present, will give you a moderate sized bed, that shall contain the greater part of the finest varieties grown, such as £250. would not have purchased ten or twelve years ago; and that whoever cultivates them with care, whether for pleasure or profit, will have no great reason to complain; for they soon repay their original cost, and amply reward the grower for the trouble and pains bestowed upon them, by the gratification and amusement which they will afford him. When this fancy, the Tulpimania, has fairly got hold of any one, it is impossible for him, hereafter, to divest himself of it; it sticks to him, like the skin on his back, and remains

with him for the rest of his life, I could quote twenty instances of persons, who have been as fond of it at seventy, and eighty, as ever they were at thirty. Its first symptoms are discernible by the admiration which this flower seems to excite on a person's beholding it; to admiration, succeeds a desire to possess it; and with possession, he becomes subject to its influence, which insensibly increases year after year, and takes such fast hold of the imagination, that, at length, it becomes an ardent passion in the mind, the gratification of which seems almost necessary to his existence; it commences, sometimes, early in life, then seems to languish, and lie dormant for years, and afterwards returns fresh as ever. It has often been made the subject of much raillery and ridicule; and you may still hear persons exclaim, "I wonder what Parson Gilpin can see in his Tulips, that he bestows so much time, trouble, and expense upon them!" without reflecting that they may have fancies of their own, ten times more absurd, and equally extravagant. I admit that I have never heard of any person having made a fortune by growing Tulips, though many have derived considerable profit and advantage from it; neither do I believe, that any one has ever been much injured by it, let him have been ever so great a bungler. How many have paid dearly for whistles, which they could make nothing of? How many have rode hobbies, which have never paid for their keeping? How many have indulged their fancies in pursuits equally ruinous to their pockets, their health, and peace of mind, and which have left the most bitter and tormenting recollections behind? The Tulip-fancy is chargeable with nothing of this sort; every thing belonging to it, is of a serene, inno-

cent, and pleasing character. We no longer hear of those extravagancies and follies, which have been attributed to the Dutch, nearly two hundred years ago, when Tulips were few and scarce; at that time a single Tulip was often the joint property of six or more individuals, and valued at from 1,000 to 5,000 guilders.

I have known persons, at the turn of life, at the age of forty-five, or fifty, commence flower growing, as the current of their blood was beginning to flow more evenly, and their minds and bodies seemed both to require respite and relaxation from the severe toil of business; and who have sought for it in the healthful exercise and amusement of a flower-garden, in which many a tedious hour has been made to pass away agreeably. As a man advances in years, his scope of action becomes more limited every day, and his capability of enjoyment also; he is, therefore, unwilling to part with any little pursuit that still contributes to his amusement: broken health, likewise, brings on retired habits, and disposes him to hold converse with himself and his flowers, rather than with his fellow-men, whose selfish views, ambitious projects, and wordly cares, no longer engage his thoughts.

The idea of Tulips being valuable property, will, likewise, cross his mind, and point out the necessity of continued and careful culture. With the return of each succeeding Spring, he feels grateful that his life has been spared; and as vegetation proceeds, and the beauties of the flower garden rise up before him, his spirits seem to revive, and he contemplates the scene with delight; he receives, also, with cheerful welcome, the yearly visits, and congratulations of those friends whose tastes are so congenial with his own.

MISS FANNY KEMBLE TULIP.

Among the new Tulips raised from seed, by our own florists, which have been recently broken into colour, there are a few, beyond all doubt, of sterling merit, and worthy of every encomium ; but I consider it the extreme of folly to endeavour to create and inspire a longing for any flower, which, in all probability, will not be gratified for five or six years to come ; therefore, every florist must not expect to find in me a willing herald, ready to sound the praises of any such new flower, whatever excellence it may chance to possess. A really good flower wants no blazonry ; it best bespeaks its own praise, and the fame of it soon gets abroad ; if this fail, let those immediately interested undertake the office at the time they have any bulbs to dispose of. Yet, out of respect for the well known veteran florist, Mr. Davey, of Chelsea, now in his seventy-fifth year, and in whose breast the fancy for Tulips is as predominant as ever, who gave, last Autumn, one hundred sovereigns to the executors of the late Mr. Clark, to entitle him to the possession of that loveliest of all Tulips, " Miss Fanny Kemble," I feel bound to attempt a short description of this flower, which was the pride and boast of its late owner, and which excited the envy and admiration of all the amateurs who went to view it. This " precious gem," a Bybloemen Tulip, was raised from one of Mr. Clark's seedling breeders, and broke into colour three years ago ; it has produced two offsets since, and is adapted to the second or third row in the bed ; the stem is firm and elastic ; the foliage full and broad, of a lively green ; the cup large, and of the

finest form ; the white pure, and wholly free from stain ; the pencilling, on the petals, is beautifully marked with black or dark purple, and the feathering, uniform and elegant ; it preserves its shape to the last, the outer leaves not sinking from the inner ; in a word, it is considered the first flower of its class, and the best that has ever been produced in England ; being now in the possession of Mr. Davey, it may be viewed, when in bloom, at his garden, in the King's Road, Chelsea.

A DIALOGUE.

The following dialogue took place, last May, in the garden of a celebrated Tulip grower.

“ How fine ! how beautiful ! those Tulips are,” exclaimed a gentleman, who had come to view them.

“ You may say that,” replied an Irish labourer, standing at the end of the bed ; “ for every body else says the same.”

“ I wonder where the loam they grow in comes from,” said the gentleman, rubbing a piece in his hand.

“ Faith,” says Pat, “ and it is hard to tell ; for my master buys it of strangers ; and we call it the superfine moonshine from Wimbledon, and Old Oak Common ; it looks, at first, as brown as a nut, and is as hard and close as any brickbat ; but after we have chopped it, and beat it to pieces, and let it lie awhile, it becomes as floury, and as mealy, as the best potatoe that was ever boiled. Master says, it has only one fault, and that a great one.”

“ Aye, pray, what is that ?” eagerly inquired the gen-

tleman; "does it contain any particles of the injurious oxyde of iron?"

"Nothing of the kind; there is nothing so vile about it; the fault is, it tastes too strong of gold."

"Now, I comprehend you, friend," said the gentleman, smiling; "but your master, I suppose, fancies that such valuable jewels deserve to be set in gold."

"Do you know the depth of the mould in the bed?" continued he.

"And please your honour," said Pat, who had just then been presented with half-a-crown, "it is as deep as any grave in all Sligo; for I have stood at the bottom of it up to my middle, and helped both to throw in and throw out the mould."

"You can then tell me if there is any dung or manure in it?"

"Sure, and I can, as it was myself that made it; you must know, then, that within a foot of the bottom, I wheeled, and trod in, a good half-foot of old cow dung, that has lain in the yard, out of sight, these two years; and by the powers!" continued the Irishman, lowering his voice, and assuming an arch expression of countenance, "you are the only gentleman, upon the face of this green earth, that I would tell my master's secret to, at all, at all; and a great secret it is, sure, or else he would never bury it so deep out of sight."

The master then made his appearance, when Pat retired.

McTULPEN, THE TULIP-GROWER.

Not a hundred years ago, a Mr. McTulpen, of some celebrity as a Tulip-grower, in one of the northern coun-

ties, who had been fortunate in gaining all the main prizes at the different Tulip-shows in that part of the kingdom, took it into his head to remove, with his family, and his whole collection of flowers, to the neighbourhood of London, imagining, no doubt, that he should find a better market, and be still able to maintain the same proud distinction and pre-eminence among the London florists, which he had held among those whom he had left behind. He was a clever fellow in his line of business, of decent address, and respectable appearance, and in no want of assurance, whatever he might lack besides; he seemed well acquainted with all the best flowers in cultivation, and had their names continually upon his tongue; if he could not boast of having them all in his garden, he, at least, had their names on a list in his pocket, and would descant upon their beauty and merits by the hour: he found no difficulty in introducing himself, or in getting introduced to most of the principal private fanciers and florists; and was freely admitted to a sight of their flowers, for the name of the last person he visited was the passport to the next. He knew several Tulips by the form and shape of their bulbs, which many find difficult often to distinguish by their cups; he made G—— stare one day, when he called upon him to purchase a few roots, which he had been commissioned to procure for a friend in the country, by selecting them, with great nicety, out of a drawer containing twenty different kinds. Captain McTulpen, as he was sometimes styled, was also a good draughtsman; and on his first visit and introduction to any of the fancy, usually exhibited a faithful portrait, after nature, of some new and wonderful flower or other, such as Atilla, the great King

of the Huns, and his fair daughter Atilliba; flowers superior to any he had yet seen, either in Holland, or England. The drawings represented them all feather, without the smallest particle of line or spot on the body of the cup, which was as white as snow, and as clear as the finest China: he had very few offsets, it was true; but he was ready to oblige his friends as far as they went. These faithful portraits, in which art completely triumphed over nature, for nature never produced any thing so perfect, served as letters of recommendation wherever he went; it was morally impossible for any florist to look upon them, without feeling, within himself, a secret hankering after a bit of the fair Atilliba.

The question in Tulip-bloom, Has McTulpen been to see you? was put daily. And whom had he not been to see? When he noticed any run or foul flowers in a bed, he boasted, that he was in possession of a valuable secret for removing those defects, which had been confided to him by his friend, the noted Mynheer Vander Nutten, of Haarlem, and which he had himself made use of with the happiest effect for some time; this, also, he promised to print and distribute among his particular friends, who had treated him with so much kindness, before he left London.

Who, in the fancy, let me ask, would not have feasted him for a month to be put in possession of such a secret?

He, however, soon became sensible, that he had taken a very improvident step, and that the Tulips, which he had brought with him, were not calculated for the meridian of London, to take their station by the side of some of the best collections in Europe; as the greater part consisted of kinds no longer esteemed, and which

had been excluded from their beds years ago. Notwithstanding all this, he continued to extol his own rare and choice flowers; and by dint of repeating their praises, and discussing their excellent qualities, he managed to impose them alike upon the wary and the unwary, the credulous and the knowing, and to set the mouths of all watering. Some of these said Tulips, to which were given strange and outlandish names, never before heard of, either in ancient or modern history, he offered to exchange for others which he wanted. He was extremely obliging and accommodating in this respect; in short, he sold what he could, bought what he could, and exchanged what he could: yet some disappointed florists were malicious enough to say, that he gave copper in exchange for gold, and Lindsey-Woolsey for silk; be that as it may, he contrived to pick up several valuable Tulips and offsets, and then set off himself; but whither has never yet been clearly ascertained. Great inquiry was made about him after he had taken his departure, which was both sudden and mysterious; many smiled, others wondered, and others exclaimed, I am done!

As Mr. McTulpen had never disclosed the place of his birth, some conjectured that he was a Scotchman, from having the Mac engrafted on his name; and that he must have returned home, and taken his flight northwards; two very improbable conjectures, said Alec Christie, as my countrymen are seldom troubled with any violent itching for Tulips; neither are they known to return to the land of cakes after they have once left it. Some supposed that he must be an Englishman, and that Captain McTulpen was only a travelling name; while one or two of the old ones pretended, that he bore a strong r

semblance to a gardener, who lived many years ago with a nobleman, near town ; and who, in his youthful days, was fond of the fiddle and the dance, and accustomed like

“ Tityre, tu patulæ recubans sub tegmine fagi,
Sylvestrem tenui musam meditaris avenâ,”

to seat himself, dressed in his long morning gown, and red Morocco slippers, under some shady tree upon the lawn, or in the garden, and to amuse himself by playing on the violin, while his two under labourers, or gardeners, were hard at work.

Oh, happy, and by-gone days, when head gardeners were only called upon to superintend the work of others, and not to share their toil ! Whilst others again imagined, that he was *Peregrinus Apostolicus*, returned to life, so well known to ancient florists ; or, at least, a lineal descendant from that illustrious name ; and that he had only quitted London to continue his labours and his travels, either in America, or elsewhere, and that he would again make his appearance at some future time.

SUMMARY.

The most essential and important points to be attended to, by a young florist, in the cultivation of this flower, are the choice of Tulips, the proper soil, the formation of the bed, the time and mode of planting, and the care and treatment required to insure a good bloom ; such as frost not held injurious to the bulbs in the ground ; therefore, the impropriety of any covering, either of straw, tan, or mats, during the Winter, because it tends to

check or prevent evaporation, and thereby engenders mildew in the bulb, by too close confinement, and the want of air. Covering, by night, with mats, to commence the second or third week in February ; for which purpose bent iron rods or hoops ought to be provided, and fixed in the ground, and the same to be covered with old fishing nets, with rather close meshes to keep out the cats, and prevent their scratching holes in the bed, and injuring the tender points of the foliage just piercing the ground : the net, also, serves to repel, and ward off, in a great degree, any sudden and violent hail-storms that may occur in one's absence from the garden. Covering, by night, to be continued till the first or second week in April, when the surface of the bed ought to be scratched over, with a pointed stick, an inch deep or so, and carefully weeded. Snow may remain on the bed, at the beginning or middle of Winter, till a thaw commences, when it ought to be instantly removed, and not suffered to dissolve, melt, and enter it. Rain to be admitted sparingly in March, and freely for the first and second weeks in April ; after which all further rain is unnecessary, and more hurtful than beneficial ; the cankered, and damaged parts, to be cut out of the leaves with a sharp knife, in a slanting direction upwards to the point. Water, lying in the cup, formed by the leaves, which inclose the flower-bud, to be drawn off by a syringe, in an evening against frost.

The cloth, or awning, may be put on any time in April ; care to be taken to admit air, at all proper times, to prevent the stems being drawn and weakened, so that they may be able to stand upright, and support the flower cup. Tulips come into flower about the middle of May ; and

as their greatest beauty is marked on the inside petals, they can only be viewed to advantage when the sun shines. When the leaves of the flower begin to drop, at the end of May, the side and end cloths ought to be removed, and the whole bed exposed to a free and open circulation of air; the top cloth ought to be kept on, undrawn up to the ridge when fair, by day, and let down at night; for experience, I believe, has taught most florists, that the bulbs are taken up in a condition much sounder and finer, and, of course, drier, when all rain has been withheld from them, after they have done flowering. The old practice was, and the opinion is still entertained, that it is necessary, after removing the side cloths, just to admit rain enough to refresh the plants and the ground, in order to swell off the bulbs; those who still adhere to this practice, will do well to read what Mr. Clark says on this point. The bulbs are generally in a fit state to be taken up about the first or second week in July, when they may be deposited in the several co-partments of the drawers or boxes, and placed on the floor of an airy room to the south, to dry; but not in face of the sun, which would cause the outer coats of the bulbs to crack and peel off. After they have lain a month or six weeks in this situation to dry, they may be cleaned, the dried fibrous roots and bits of stems removed, and then put away, and kept in the driest part of the house, till the season for planting again comes round.

The selection of Tulips, and the best mode of purchasing them, with the least risk of deception or disappointment, will be given in another part of this Supplement.

A fresh arrangement of the bulbs, in the boxes, before

planting, is required, more or less, every year; new ones may have been purchased; some may have been sold; and some, perhaps, have perished in the ground, others will have to exchange positions in the bed, where they had been before misplaced; a close group of Bizarres will want to be separated, and the foul and sickly bulbs to be removed to the outside beds; let all this be done in the Autumn, as opportunities occur. The offsets of your best Tulips, which are too small to flower, may be planted the middle of October, and covered to the depth of two inches and a half. Bear in mind, also, that the first week in November is generally more favourable for gardening than any other part of the month; therefore, plant your choicest bulbs without further delay, putting a very little river, not sea sand, to each, and cover the whole three inches deep, reckoning from the apex, or top of the bulb. The beginner must understand that no unsightly tallies, or number sticks, are used to distinguish the Tulips; but that he must adopt a sort of ground plan, and write the name and place of each Tulip in a book, dividing the whole bed into rows of seven bulbs across; for example, take and write down the names and places of the Tulips in the first row, and continue the same form all through.

ROW 1st.

- 1 Fenelon,
- 2 Duchess of Kent,
- 3 Charlemagne,
- 4 Louis XVI.,
- 5 Memnon,
- 6 Volney,
- 7 Lady Crewe.

As the catalogues of dealers, in their improved form, now mark the height and place of every Tulip, there is less difficulty in arranging them in the bed ; according to the customary mode of planting it, the tallest flowers are placed in the middle, or fourth row ; the next tallest in the corresponding rows, three and five ; the next in height, in two or six ; and the lowest, in the outside rows, one and seven. Thus the Tulips, when in flower, present nearly the same height, along the whole length of the bed in each row, though they vary in the cross rows ; this gives it a rounded appearance, declining gradually from the centre to each side.

The method, and the arrangement, which I have just attempted to describe, are those which all our English florists have, for a long time, pursued, and with which all seem to be satisfied ; whether this plan is the best that can be devised, or whether it produces the most pleasing effect, and exhibits the cups in the most striking point of view, I am not the "*arbiter elegantiarum*" to decide : some hints, indeed, for an alteration were suggested, a year or two ago, by the ingenious Author of the *Gardener's Magazine* ; but this I know, these hints were rejected by all our amateurs, who pretended to any taste in these matters, as totally inapplicable. Tulips, sometimes towards the end of their bloom, particularly if the weather has been dry and hot, which is not very often the case in May, seem to languish and droop before their time, from confinement, and want of moisture ; in that case, some will at evening water the leaves lightly with a fine rose, like the sprinkling of dew ; this certainly refreshes them, as appears from the upright position of the stems and the cups in the morning, and

the firm texture of the leaves; yet it is attended with one unpleasant effect, namely, the leaves afterwards soon turn brown, and appear stained and unsightly: my opinion is, they are far better without it; but on no account neglect to well water the ground and alleys round the bed; this cools the air, and gives refreshment without injury to any part. I have known Mr. Holmes, in hot seasons, make holes at the sides and ends of his bed with a crow bar, and pour in water in an evening; this reaching the roots, refreshed the whole.

To conclude, I have no hesitation in saying, from my own experience, that whoever will be at the pains to pursue the mode of culture, described as above, will seldom fail to receive the gratification every year of beholding a good bloom, of keeping his bulbs healthy, and of finding a fair increase of effects to them; for whatever is thought worth doing at all, ought to be done well, and *secundum artem*.

The following Catalogue of Tulips is more select than numerous; it contains most of the highly esteemed varieties, which are familiar to florists; at the same time it gives the names of many fine new flowers, both English, French, and Flemish: those marked with an asterisk, and which are not yet generally known, may be viewed in the garden of the Author at Paddington.

ROSE COLOURED TULIPS.

Row.		Row.
2. Aglain.		3. Adoam.
4. *Anne Boleyn.		2. Amaryllis.
1. *Ariadne!		3. Amadis.
1. *Asor.		Aldegonde.

Row.

3. Andromacha.
1. *Aspasia !!
1. *Adèle.
1. *Assakie.
1. Azemia.
3. Bellona (Franklin's) fine!
3. Brulante Eclatante.
3. *Boadicea.
2. *Belle Thouvenel !
3. *Belle Christine.
3. Bacchus.
1. Catalani.
1. Catharine.
3. Comet (Strong's.)
3. *Camilla !
1. *Cramoisi de Tintigny !
3. *Comtesse de Flandre.
4. Comte de Virgennes.
2. *Cleopatra.
3. *Claude !
- Calista (Davey's.)
1. Cornelia.
1. *Constance !
2. *Cleomenes.
2. Czarine.
2. Cerise primo.
2. ——— haut.
1. ——— Royale.
3. Claudiana.
2. Cordelia.
1. *Duchess of Newcastle.
3. ——— Kent (Strong's.)
fine ! !
2. ——— Clarence.
2. *De La Valliere.
3. Diana.
3. Eclipse.

Row.

3. *Etoile de Mages.
3. Earl Grey (Franklin's.)
2. Galatea.
3. Globertine.
1. *Harmodias.
3. *Hortense.
3. Hinckmar.
2. Heroïne.
2. Herodias superbe.
2. Hebe.
1. Incomparable primo.
1. *Josephine.
1. Julia.
1. Juno.
1. *Lady Crewe !
1. *—— Balcarras.
1. *La Reine de Tulipes.
4. *—— de Swède.
1. La Fleur de Dames.
2. *La Gaïeté.
1. La Pureté.
1. La Tendresse.
4. La Vandikken.
2. Lord Hill.
4. Lord Brougham (Franklin's.)
4. ——— Byron (ditto.,
3. ——— Colchester.
2. *Lavinia ! (Clark's.)
3. *Madame Adelaide.
1. *—— de Seigné !
2. Matilda.
2. *Melpomene.
1. *Marshal Oudinot.
4. Miss Edgeworth.
1. Manteau Ducal.
- 2 or 3. Murillo.

Row.

2. Maria Louisa.
1. *Nereide!
3. Ophelia (Browns.)
2. Princess Victoria.
3. *—— Marie.
2. ———— Wilhelmina.
1. *Pulcheria!
1. *Pamela.
1. *Prometheus.
1. *Pallas.
2. Portia.
2. Ponceau tres blanc.
2. ———— Brillante.
2. *Peruvienne.
4. Pretiosa.
4. Rosa Blanca.
4. Red Rover (Franklin's.)
3. Rosetta (Davey's.)
- *Riego.
2. Rose Camuse de Craix.
1. ——— Cerise à belleforme.
3. ——— Brillante.
3. ——— Camuse.
1. ——— Cerise blanche.

Row.

3. Rose Esther (Strong's.)
4. ——— Eliza (ditto.)
3. ——— Lac.
2. ——— Monton.
1. ——— Premier.
3. ——— William.
1. ——— Riente.
2. ——— Quarto.
1. ——— Maria.
3. ——— Manon.
2. ——— Guerrier.
2. ——— Non plus ultra.
1. ——— d'Hyménée.
3. *Sophia.
3. *Triomphe de Tournay.
1. ——— d'Holland.
3. ——— Royale.
3. *Tulliola.
3. Thalestris.
3. *Virginia!
1. *Venda.
2. *Validé.
2. Vesta.
3. Walworth.

BYBLOEMEN.

3. Anacreon.
2. *Ariosto.
2. *Aristides.
3. Addison! (Strong's.)
2. *Artabanes.
3. *Arsinoe.
2. Alcestes.
4. Albicore.
4. Absalom.

4. Ambassadeur d'Holland.
4. Abdalonimus.
2. Aggida.
4. Alexander Magnus.
2. Bijou des Amateurs.
3. *Bellona.
3. *Bernadotte.
4. Buonaparte.
- Britannia (Davey's.)

- Row.
2. *Belle Perlienne.
 3. Boadicea.
 3. Black Prince.
 - 3or4. — Baguet.
 3. *Comtesse de Verteuil.
 3. *Comte de Provence.
 3. *Charlemagne!!
 4. *Crebillon.
 2. *Celestina.
 4. *Cleander.
 2. *Clovio.
 3. Cato.
 3. Cicero.
 3. Cheval Noir.
 3. *Duchess of Kent!!
 3. ——— Wellington.
 3. ——— Tuscany.
 4. David Wilkie (Strong's.)
 3. Duchesse de Parme.
 4. *Duc de Dalmatie.
 2. *—— Berri.
 3. David Wilkie (Franklin's.)
 3. Desdemona.
 - Daviana.
 2. David.
 2. *Drouet.
 4. *Daubenton.
 3. *Desfontaine.
 3. *Dey of Algiers.
 2. *Erasmus
 3. Europa (Strong's.)
 2. Eminent.
 2. *Emperor Baldwin.
 - 2or3. Fanny Kemble!!!
 3. Flora.
 1. *Fenelon.
 - 3or4. Franklin's King William
the Fourth.

- Row.
3. Franciscus primus.
 4. *Grand Duke of Luxemb-
bourg.
 4. *General Guilmenot.
 4. *—— Kleber.
 2. Germanicus.
 4. Grand Prier.
 1. Gloria Alborem.
 3. Grotius.
 1. Gloria Mundt.
 - Grand Sultan!
 3. Greco's King William!!
 4. Grandeur Touchante.
 2. Gadsby's Magnificent.
 3. Holmes's Queen Charlotte.
King.
 3. Imperatrix Florum.
 4. Imperatrice Romaine.
 3. ——— de Maroc.
 2. *La Desirée.
 1. *—— Polonaise.
 2. *—— Victrola.
 2. — Virginité.
 3. — Joie blanc.
 4. — Mere Brune Incom-
parable.
 1. — Beauté Angloise.
 1. — Belle Actrice.
 2. — Belle Irlandaise.
 4. Louis XVIth.
 3. Lady of the Lake! (Law-
rence's.)
 2. Lord Liverpool! (Gold-
ham's.)
 3. ——— Braybrooke.
 3. ——— Holland (Strong's.)
 3. Leonidas.

Row.

2. *Licette.*
3. *L'Interessant.*
2. *Laura.*
3. *Lysander Noir.*
2. *Linnæus (Strong's.)*
2. *Mentor.*
3. *Marius.*
3. *Moreau.*
2. **Mansolée de Mehl.*
3. **Maurecardato.*
2. **Ma bien Aimée.*
2. **Nina.*
3. **Olivier de la Paix.*
2. *Princess of Wales.*
4. *—— Charlotte's Cenotaph.*
- *Prince Otto.*
- *—— d'Anhalt.*
- *—— de Saxe.*
3. *—— George.*
3. *—— Louis.*
4. **—— de Ligne.*
3. **Plutarch.*
3. **Pliny.*
4. *President (Davey's.)*
2. *Perle d'Angleterre.*
3. *Perfecta.*
3. *Paradis Terrestre.*
3. *Queen Adelaide (Franklin's.)*
2. *—— Adelaide (Groom's.)*

Row.

3. **Reine Anemida.*
3. *—— d'Egypte.*
2. **Roi de Westphalie.*
3. *—— de Perse.*
3. *—— de Siam.*
3. *—— de Violets.*
3. **Rubens.*
3. *Rodney.*
3. *Rainbow.*
3. *Rosina.*
2. *Rowbottom's Incomparable.*
- 3or4. *Shakspeare (Franklin's.)*
2. *Superb en Noir.*
4. **Stadtholder.*
3. *Swartr's Violet.*
2. **—— Tabard.*
4. *Scipio.*
3. **Tana.*
3. *Tahna.*
4. **Tanquinius Superbus.*
4. *Thalia (Clark's.)*
3. *Transparent Noir.*
4. *Triomphe de Lisle.*
2. **Volney.*
4. *Violet Alexander.*
4. *—— Triumphant.*
4. *—— Grand Turk.*
3. *Waller's Violet.*
2. *Walker's Juliet.*
3. *Washington.*

BIZARRES.

- | | |
|--|--|
| <ol style="list-style-type: none"> — <i>Artabanes (Davey's.)</i> 2. <i>Abercrombie.</i> 2. <i>Archduke Charles.</i> | <ol style="list-style-type: none"> 2. <i>Admiral Duncan.</i> 3. <i>Andrew's George IVth.</i> 2. <i>Bolivar.</i> |
|--|--|

Row.

3. Bradley's Salamanca.
3. Charbonnier Noir.
3. Carlo Dolci.
- Comet (Davey's.)
2. Castrum Daloris.
4. Commandant.
2. Cancelier.
4. Caledonian.
3. Charles X.
4. Carter's Prince Leopold.
4. Commander-in-Chief.
3. Captain White.
3. Duke of Bedford.
4. Dutch Catafalque.
3. Darius.
3. Dr. Franklin (Franklin's.)
4. Duke of Clarence.
3. Emperor (Franklin's.)
4. ——— of Austria.]
3. ——— Charles.
3. Earl Munster.
3. Fabius.
1. *Feu d'Austerlitz.
2. Germanicus!! (Strong's.)
3. Garrick (Franklin's.)
1. Gloria Mundi.
3. Garnett's Trafalgar.
3. Holmes's William Pitt.
3. Isaac Walton (Lawrence's.)
3. Junius Brutus."
3. *Leonatus Posthumus.
4. Lucina.
3. Læcar.
2. Lord Fortescue.

Row.

2. L'Aventurier.
3. *Memnon!
3. Marcellus.
4. Milo.
1. Mount Ætna.
3. Mark Anthony.
1. Maysonia.
2. Mount Hecla.
2. Optimus.
3. Pompe Funèbre.
1. Phaon.
- Phidias.
1. Pigmé.
4. Platoff.
2. *Polyphemus.
3. Rigg's Cobourg.
3. Rembrandt (Groom's.)
3. Shakspeare!! (Lawrence's.)
2. Sir Isaac Newton.
3. Surpasse Catafalque.
2. Strong's King.
2. Sir George Duckett.
3. San Joe.
3. Surpasse Pompe Funèbre!! (Strong's.)
3. Titian! (Strong's.)
2. Talma.
4. Tippto Saib.
3. Tycho Brahé.
2. *Ulysses.
1. Vulcan.
4. Willmer's Duke of York
2. Zeno.

N.B. The late Mr. Slater raised a number of seedling Tulips, which I have not seen; but as they so soon found their way to the Auction Mart, I conclude they were not of much value; and, therefore, unworthy of being introduced in the above Catalogue.

The reason why I have not inserted more of the late Mr. Clark's seedling Tulips, is, that they are now mostly in the possession of private growers, and are not to be purchased, if inquired for, and will very probably receive other names.

OF THE CARNATION.

As the culture of the Carnation has already been treated of so fully in my former publication, I purpose to confine myself to such parts of it as appear to have been left defective, or that require to be amended; and to save the trouble of frequent reference, as well as to afford instruction to those who may not be possessed of that publication, I have given, in one continued and connected form, under the title of Summary, an abridged account of its general management throughout the year.

Within these ten years the general character of the Carnation has been greatly improved, and its varieties of good flowers more than doubled, by the pains bestowed upon its culture. The mode by which seed is to be obtained from a double Carnation, in favourable Summers, is now better understood, and more carefully attended to; this, of course, gives a greater increase of plants, or seedlings, every year, hundreds of which are continually cast away as of no value; even a middling flower is not worth retaining; yet among them will spring

up, every now and then, one of superior excellence to the rest ; such a one, it is true, does not make its appearance very often ; it may be said to be one out of a thousand : the fortunate raiser of such a flower, to say nothing of the pleasure which it affords him, is often well rewarded for his pains ; it soon attracts the notice and admiration of other florists, and is eagerly purchased by them at a high price.

Of those newly raised varieties, many are not only richer in colour, but larger in size ; and it is pleasant, also, to observe a corresponding improvement in the taste of those who cultivate them. We seldom now hear of premiums, or prizes, being awarded at any Horticultural Meeting, or Flower-Show, to those small insignificant things which used to be exhibited formerly ; three of which would hardly make one good one. A Carnation, of scarcely two inches across, is now very little thought of, notwithstanding the cry with some, that “ quality is every thing, and size nothing.” Such persons would do well to recollect, that a seven shilling piece cuts but a sorry figure by the side of a sovereign ; or a child’s doll, compared with the *Venus de Medicis*, or a handsome woman ; moreover, he, who strives to excel, ought never to remain satisfied, till he has succeeded in producing flowers, that combine both size and quality ; and to which he has, in growing them, imparted all the largeness and brilliancy that art and skilful culture can accomplish ; he may, then, possibly exhibit something worth looking at, and be justly entitled to the meed of praise, as well as to the prize awarded him.

The formation of Horticultural Societies, has, beyond a doubt, diffused a greater fondness for floriculture

throughout the country ; and the encouragement, which has been given both to the gardener and florist, by distributing rewards among those who have excelled in producing the finest fruits and vegetables, as well as flowers, has been attended with the best effect ; for while it has afforded to the industrious and skilful cultivator an opportunity of displaying his abilities, it has also excited a stronger spirit of competition in all, and has produced and called forth better and improved modes of culture.

CARNATION MOULD.

Every person, the least conversant with soils, must have remarked the superiority of fresh broke up earth for every purpose of gardening ; if good in quality, it requires no manure to stimulate it ; it will be found sufficiently fertile, and productive of itself, for a couple of years, at least, till the turfy and fibrous portion of it shall have been completely decomposed and spent ; the reason must be, that the breaking up, and turning of the earth, and the gradual decomposition of the turf, which may in itself be considered a dressing of vegetable manure, must generate, and throw out a greater portion of carbonic-acid gas ; and attract more forcibly, as well as retain the gaseous fluids, hydrogen, and oxygen, which constitute the chief elements of vegetable life ; the ground, likewise, being loose and porous, will admit and discharge the rain more freely, and enable the roots of plants to extend their young fibres without difficulty. I would recommend any provision of fresh earth, not immediately wanted, to be piled up on the surface of the ground, with the green sods

uppermost, and to let vegetation continue in it as long as it may, instead of throwing it into one promiscuous heap, with the view of rotting the turf the sooner; because, strong loamy earth, when the turf and fibres are quite decayed, will often become close, adhesive, and livery, and less adapted for potting in particular; for this reason, we have preferred, of late years, the soil and turf that have been dug a year and a half, or two years, to that which has lain longer: in that time, by beating it to pieces, and turning it over frequently, we are enabled to reduce the turfy part sufficiently to mould. We generally mix up our compost for Carnations, about Michaelmas, that it may get well incorporated, and be fit for use in the Spring; we, likewise, use less manure than we did some years ago; and I am of opinion, that we have since kept the plants sounder, by not forcing them to such a degree; and that the colours have been equally bright and fine, while the number of run flowers has been fewer.

We mix it in nearly the following proportions:—two-thirds mould, of a loamy quality; one-third rotten frame dung; and drift, or river sand, more or less, according to the nature of the mould; in general, about one good barrowful to a small cart load. But if the rotten dung is old, and its strength much exhausted, there can be no impropriety, in that case, of using nearly as much manure as loam.

For yellow Picotees, or any other delicate growing flowers, we add to the same compost about three barrows of leaf mould to a small load; this, of course, improves it greatly, while it reduces its consistency, and makes it

lighter. The proportionate quantities will be better understood thus:—Five barrowfuls of Carnation compost and one barrowful of leaf mould.

I have found this mixture to answer extremely well, for the plants grow in it as freely as I could wish.

Another receipt, which I received with some yellow Picotees, from a friend in Germany, consists of one-third fresh mould or loam, not too close and stiff; one-third bog or peat earth; one-third two year old cow-dung.

We have tried this, also, and esteem it a good and suitable compost; for I fancied, that the yellow ground colour of the Picotees was improved by it, which I consider a great advantage gained, and a strong inducement to use it; for, in many of them, after growing two or three years in England, the yellow gets paler, and the beauty of the flower is, of course, much diminished: the hot sun, likewise, affects the yellow colour, and extracts part of it; they ought, therefore, to be placed in rather a shady situation, as soon as they are in bloom, or else to be well protected from its rays.

THE WIREWORM.

Fresh dug earth is hardly ever free from Wireworms, the great pest of Carnations; it is sure to contain some, few or many, and the greatest pains ought to be taken to get rid of them. We, ourselves, never begrudge either the labour or expense attending the search. I would sooner employ a man for a fortnight, to turn over a load of mould, grain by grain, than incur the risk of losing more than treble the amount of his wages in the loss of Carnations. We are not satisfied with keeping a sharp look out every

time we turn the mould over with the spade, but if we suspect that it is not quite free from them, we subject it to a still minuter inspection, by putting two or three shovelfuls at a time on the potting bench, and turning the whole over twice with a bricklayer's trowel : we almost insure their destruction this way. An active man, or a lad, with a quick eye, will, in a couple of days, turn over and examine mould enough to fill a hundred large pots ; and there are not many private growers who bloom more. Soot will drive them from the mould, but nothing more.

IMPREGNATION.

I would recommend to the curious florist, whenever he perceives two perfect styles, vulgarly called horns, projecting from the centre of any Carnation blossoms, to impregnate them either with their own pollen, or that of some other flower. The female organs, in a Carnation, consist of two pistils growing out of the top of the ovary ; and the styles, which connect them with the ovary, and support the stigma, are so long, and rise so high above the stamens, that it seems almost impossible for impregnation to take place without the aid of insects, or of other agents ; there is a difficulty likewise in meeting with perfect stamens and anthers in a double Carnation, that has been closely podded ; that is, when all the flower buds have been removed but one or two ; and it also frequently happens, that the stamens are nearly buried in the hearts of the flowers, and concealed from view. In the next place, it is extremely difficult to detach and remove them, without losing and scattering the pollen from the anthers in doing it : the filaments are so

extremely fine, that the finger and thumb are of little use in performing this, without the aid of a pair of small tweezers, which ought to be ground down, and rounded at the points; or else so formed at the first, to be about half the size of the nail on the little finger; these, I have found, to be the most convenient instruments to make use of for this purpose. With the forceps of the tweezers lay hold of the stamens by the filaments that support the anthers, and extract them carefully from the calyx, without disturbing the pollen; this, of course, ought to be lodged on the centre of the stigma; but this part of the pistil is not easily distinguished here, for the styles shoot upwards, and end in very fine tapering points; you will, therefore, pass the anthers, loaded with pollen, along the styles, to the extreme end of those points, to which the fertilizing dust will sufficiently adhere to take effect.

A still, clear morning, is the best time to do this; for, in a hot sun, when the anthers are in a fit and ripe state for impregnation, they soon burst and scatter their pollen, which then becomes lost to you; and the safest way is to fecundate twice, on separate mornings, to insure its taking effect; for, if the stigma has not exuded its viscus, or glutinous matter, and is not in a state to receive the pollen, your labour will then be in vain. I have frequently noticed, that some of the flowers, which have been so impregnated, will, in two or three days after, close their leaves, and fade; when this is the case, they ought to be removed from under the awning, and set in the open air, and have the benefit of the sun, with a glass, or paper cap over them, to protect them from the wet, if there are the least signs or fear of rain; for when

the leaves of the flower once get thoroughly wet, decomposition quickly follows ; the dampness in the leaves soon generates a mouldiness, or kind of mildew, that destroys the whole ; ovarium, pistils, and petals, all rot together. Again, if every thing goes on well, it is always safest to extract the petals carefully from the calyx, in about ten days after they have begun to fade, wither, and decay, taking care not to break off or separate the pistils from the ovarium ; there is then nothing left to imbibe moisture, either from the dews, or wet, and they may be exposed to the weather without injury : the ovaria, shortly after, will begin to swell and grow, and afford you the almost certain prospect of a crop of fine plump seed, every grain of which you may expect to vegetate, and produce a new plant.

Though I have frequently saved seed from plants, of which every layer was cut and laid down, yet, I am of opinion, that it would be better not to lay the whole, but to leave two or three layers untouched, nearest the root, to draw the sap, and supply nourishment ; when this was done, I always fancied that the seed was both larger and finer. The seed ought to be suffered to ripen well on the plants before it is gathered ; but when the pods become brown, and ready to burst open at the top, you may then cut them off, and place them on a shelf near the glass in a greenhouse, or other similar situation, to dry, and harden for awhile ; after which put them away in paper bags till wanted. Pink and Carnation seed will keep good for two years ; after that time it comes up partially.

SOWING.

The seed may be sown the first or second week in April, in common seed pans, which run about fifteen inches across and five inches deep, and covered half an inch; let the mould be kept moderately damp, and watered, when necessary, with a fine rose, so as not to disturb the seed. We place the pans, for the most part, in a frame, with the lights on, or under hand-glasses, till the plants make their appearance, when we expose them, by day, to all the gentle rain that falls; but protect them always from any heavy driving showers, that would wash their roots bare. When the plants have attained the height of an inch and a half, the sooner they are transplanted the better; you may either put them in large pots, two or three inches apart, or put four plants in a forty-eight pot, and set them in rather a shaded situation, during the hot Summer months. The young plants often suffer great injury, if not watched, from the larvæ or maggot grubs, of that little troublesome insect, the *ptinus fur*, (a diminutive species, I believe, of brown beetle,) which eat out the hearts or receptacles: the plants, so damaged, not having yet formed side shoots, perish; to guard against these ravages, we now and then scatter over them a little Scotch snuff, and ground black pepper. These seedlings flower the second year; many florists will plant them out in the open ground, on a gentle slope, or on a bed well raised, and rounded, about the middle of September, not later; they have then time to get firmly rooted in the ground before Winter; and, in this situation, they will grow and flower without sustaining much injury; but if the garden is low and

damp, it is a safer way to keep them through the Winter in pots, and to plant them in the ground the beginning of April; such is the plan we pursue, with the exception of some few particular seedlings, which we flower in pots.

The experienced florist is never inclined to decide too hastily upon the merits of new flowers, however fine they may appear in the seed bed; because he knows, they will often vary and come very different from what he expected; by waiting to see them bloom the second year, he is enabled to form his opinion with some certainty; and this necessary caution not unfrequently prevents both surprise and disappointment.

Seed sown in a cold frame, within seven inches of the glass, (without the pans,) is a more eligible way; they are sooner covered, in case of any driving rains, or hail.

PROPAGATION BY CUTTINGS.

Plants, raised from cuttings, are esteemed, by most florists, preferable to layers, and in general considered both healthier, and hardier, as they are less affected by the weather, be it ever so severe; if they are not quite so large, nor so forward as the other, yet in Spring they seldom fail to throw out a healthy stock of grass for future increase, with the promise of a fine Summer bloom, in which they do not often disappoint us; this mode of propagating, I grant, is more hazardous, and its success less certain, than by layers; you may succeed one Summer, and yet fail the next, though the same means be used in every respect; for which reason, laying is still in more common use; something depends, also, on the weather; for I have remarked, that we have succeeded worst in very hot Summers, when they have required

much shading; and that our success has been greatest, when the atmosphere, being rather moist and cloudy, there was less occasion for it.

A friend of mine used to be eminently successful with his cuttings, from the simple circumstance of placing his piping bed on the north-east side of a large pear tree, which used to protect it from the rays of the sun, during the hottest part of the day; and, to use his own words, to throw a mock shade, (shadow,) over it, which rendered farther covering unnecessary, and, therefore, left them more exposed to the light; but having occasion to change his residence, and to remove to another house and garden, where he no longer had the benefit of the old pear tree, he found that he was unable to pipe with the same certainty as before.

In the Summer of 1828, which was remarkably wet and cold, with very little sun, our pipings were put in about the middle of July, on a very gentle dung heat, in an exposed situation, and not shaded at all that year, for it was not necessary to do it; and they nearly all took root, and did well; it was what we term a general good strike. Early piping, before the Carnations come into flower, succeeds best, though it gives more trouble, because every plant requires to be marked separately, to avoid the disappointment arising from propagating run flowers; in some seasons, the grass will be quite ready by the 21st of June, or sooner. Pipings cut immediately below the second joint, make the handsomest and most compact plants; but, in this respect, you must be altogether guided by the condition of the grass; if you think it is not firm enough, cut it at the third joint. Let the mould be always kept moderately damp, and the watering

given, on the outside of the striking glasses, in the evening: watering them in the sun, is as bad as parboiling them. Bunting, and Scotch Gauze, make a better covering for them, after they have been piped two or three weeks, than the common garden mat, because they admit a faint glimmering of light.

Though I have here pointed out the benefit which pipings have derived, when not excluded from the light, yet let it be constantly kept in mind, that you cannot even for one hour leave the pipings, that have lately been put under the glasses, exposed to the rays of a hot sun, without sustaining great injury; for with the glasses heated, and the sun still acting upon them, the leaves soon get scorched, and the sap in them dried up, which was to be their main support, until the cuts were healed, and the joints had time to form and throw out new roots.

Artificial heat, either from dung, tan, or leaves, is not absolutely required; the pipings will root and grow without, though they will be longer in doing it; for the heat of the sun, and the warmth of the ground, at this season, with the total exclusion of air, and their close confinement, are quite sufficient to cause them to form new roots; but, in this case, I would recommend the use of the small bell-shaped glasses, and the piping bed to be raised on a mound of earth, a foot above the surface, with a layer of coal ashes underneath, to keep the worms from disturbing them.

STRIKING GLASSES.

Our striking glasses are of different shapes, and different sizes, such as bell glasses, both of white, and common

green glass, and some others ; but the most approved are small square glasses, well cemented with lead, with low roofs, and a tin tube at the top, wide enough to admit a common cork ; the pipings, as I observed before, being placed on dung heat, of moderate warmth, we judge it best, when we put the glasses on, not to confine them too closely for the first ten days, in case any steam should rise ; therefore, we leave the tubes open, and put the corks in afterwards. As soon as the pipings have taken root, and have begun to grow, and require a little air, we remove the corks altogether ; and as they advance in strength, and are nearly ready to transplant, we harden them off gradually, by giving more air, which is done by raising the glasses an inch or so at the bottom ; we also give them the benefit of any gentle showers, to promote their growth.

We previously make use of these glasses to cover the Carnation blossoms, till they are wanted for the pipings. Each side measures about nine inches long and three inches high, below the roof, and the slope of the roof, to the tube, five and a half inches, covering a space of eighty-one inches square : we have others, likewise, of the same construction, but smaller, viz. six inches being the length of the side of each square.

CHANGE OF AIR AND SOIL BENEFICIAL.

Carnations, like many other delicate plants, do not like to be confined to the same spot for many years together ; they require change of air, as well as change of soil occasionally, to keep them healthy ; for this reason florists, living at a distance from each other, often

derive a mutual advantage from exchanging layers of the same sorts, every now and then in the Autumn: experience has shewn the expediency, or rather the necessity of doing this. Some flowers are, in constitution, hardier than others; we have some, that we have propagated and kept in health for years together; whilst there are others, more delicate, that we are obliged to renew and purchase afresh every three or four years, if we mean them to produce healthy blossoms; and such only can come from healthy plants; but, be it understood, that I am speaking here of a town garden, surrounded, on all sides, with houses and a smoky atmosphere. If, therefore, you wish to preserve any rare, or favourite flower alive, that has begun to decline, and look sickly, and on which care and culture seem thrown away, as it no longer grows well, nor blows well, consign it to the care of some friend, without delay, if you do not wish to lose it altogether; and let no vain or selfish motive deter you from doing it. Some people imagine, that sickly plants can only be recovered by frequent watering; but this only kills them the sooner, and ought to be avoided; for they are not in a condition either to receive or discharge it, and its only effect is, to cause the roots to rot the sooner. I myself have to regret the total loss of many choice flowers, in my time, by tampering with them too long, and by being unwilling to let them go out of my possession.

CARNATIONS AND PICOTEEES, DESIRABLE ON ACCOUNT OF THEIR LATE FLOWERING.

The Carnation, and Picotee, still continue to adorn the flower gardens of the ladies of our nobility and

gentry, for this reason ; that when the attractions of a London Winter have ceased, though protracted through the Spring ; when the fashionable places of public amusement have closed ; when the Court has adjourned its Levees, and the two Houses of Parliament have got through their arduous and important labours ; and they and their families return to their country seats, to enjoy repose, and to recruit their wasted health in a purer atmosphere, amidst the delightful scenery of nature ; the ladies find these flowers waiting their return, and ready to greet them with the most inviting fragrance, and to offer their varied and beauteous blossoms to their view, the greater part of July and August : on this very account, the Carnation, and Picotee, independant of other attractions, have become favourites : the handsome Geranium, the lovely Rose, and many other choice shrubs and plants, have already shed their bloom ; the only drawback to this preference is, the unskilful manner in which they are too often treated by their gardeners ; the complaint constantly sounded in my ears has been, they do not know how it is, but their Carnations never flower anything like those they see with me.

Our present Gracious Queen, the amiable, intelligent, and kind-hearted Adelaide, is particularly fond of these flowers, and has a very tasteful collection of them in her newly-formed flower garden at Windsor ; to which I also had the honour of contributing part : whilst Duchess of Clarence, and residing at Bushy, she never failed to visit, in the kindest, and most condescending manner, the gardens of the florists around that neighbourhood. Lawrence's bed of Tulips at Hampton, was to her a

particular point of attraction ; and, with quick eye, and correct taste, she used to point to his finest flowers. In the reign of George IV. large and choice collections of florists' flowers, particularly of Tulips, Carnations, Geraniums, Dahlias, Roses, and Pinks, were kept in the Royal Gardens at Windsor, under the superintendence of Mr. John Aiton ; Gould, the Gardener, who had charge of them, was an excellent and enthusiastic florist ; he constantly exhibited at the Windsor flower-shews, and generally came in for his share of prizes ; whenever he was fortunate enough to win the main prize, the silver cup, the King, who was always apprized of what passed, never failed to order him a small token of his bounty, in approbation of his conduct, by way of encouragement. The silver cup, for Carnations, has been often warmly contested at Windsor ; and twelve fine stands of flowers have been exhibited at one time. The prize, not unfrequently, has been awarded to a London florist ; three or four of whom, for some years, made it a point of honour to enter the lists against His Majesty's gardener, in particular.

POTTING.

The practice of firm and hard potting for layers, just removed, (it may do very well for shrubs,) is now properly discarded ; for the heavy pressure upon the roots is hurtful, and it prevents the fresh fibres from entering the mould, when too closely condensed ; tender plants do not require it ; a gentle shake or two, on the board, and a slight watering, are quite sufficient to settle the mould. I may here very justly enter a complaint of the ill-treat-

ment that the layers of Carnations, just removed from the mother plant, whose roots are still young and tender, too often receive from the rough and careless handling of gardeners in potting them; they may be said, in a great measure, to destroy the life of the plants at the outset, instead of preserving it, by not only bruising the roots, but by often forcibly detaching them altogether; and this, too, at the approach of Winter, when the plants have little chance of recovering from the injury. The old rude method of dibbling with the finger, and ramming down the mould with the thumb, seem still to prevail; the roots ought to be as tough as wire to bear such usage; and pointed as needles, to be able to make their way through it. I wish our friend Loudon could teach these men the "humanities;" and then one might expect to hear of Carnation layers, entrusted to their keeping, treated with something like the care and tenderness that they are obliged to shew to the young plants of Cucumbers, Melons, Balsams, &c. at their first potting; there would be then little occasion for them to seek for excuses, or to bring groundless charges against the persons who supplied them, in order to screen their own neglect and improper treatment. It is not every gardener, that knows how to grow a Carnation, however lightly he may treat it, and however confident he may feel of doing it; if he neglects to prepare proper compost, his plants will not thrive; if he does not pay requisite attention to them before, and during their flowering, the bloom will not be worth looking at; and if he does understand how to propagate them, they will all very soon perish. Gardeners, unaccustomed to flowers, are, in general, bad propagators; few of them have any right notion of piping; and

though nothing is more simple, they never set about it, as if they wished to succeed. What can be the cause of this indifference? Is there no responsibility attached to a failure? They are, likewise, great bunglers in laying; there is not one in ten whose assistance I would claim upon the most pressing occasion, and leave the operation to them, uncontrolled and unlooked after; whereas, I could trust implicitly to any amateur cobbler, tailor, weaver, or barber, who had had the least practice with their own flowers, to do this laying in the most satisfactory manner. This I know from experience, that very few of them, unless fond of the flower itself, seem to take any care of them, or treat them right, or bloom them well.

The numerous plants that I have sent to different ladies and gentlemen, I have found, in a year or two, have all come to nothing in their hands, for want of skill and proper care; whereas the same flowers, sent to any individual who has cultivated them himself, solely for his pleasure and amusement, and who had not the least pretension to any knowledge of gardening, beyond the care of a few flowers, have been grown, preserved, and propagated for years, with the greatest success.

I fancy I hear one of those practitioners of the blunt knife, and finger dibber, for the race does not yet appear to be extinct, cry out, what an ungrateful conceited fellow that Hogg must be, to fancy that nobody can grow Carnations besides himself, and to find fault, too, and charge us with the destruction of them; the loss of which must promote the sale of more: he is the last person that ought to complain. To such my reply, in rejoinder, would be, "nay, nay, friend, one purchase, and one failure, always close the account;" it is from the suc-

careful cultivation of them only, that a florist ever expects, or receives any future order.

The Carnation has no ligneous substance like a Geranium, or Heath, neither does it die down, like an herbaceous plant, and rise again in the Spring; and though it belongs to the family of grasses, it will not bear to be cut down, and stript of its foliage; it may not improperly be considered as a biennial; for if planted in the ground, and left to its fate, it will rarely survive that period; it will not be treated with neglect. The London Horticultural Society, in the time of Mr. Sabine, were at some pains and expense to form a collection of Carnations and Picotees, both English and foreign; but they had not a man in the garden who knew how to treat them, and they all perished in a year or two. They used to send a few wretched blooms to be exhibited at their meetings in Regent-street, till they were ashamed to own them; especially if ranged near any other well blown blossoms, sent by some professed amateur florist.

MR. CLARK'S METHOD OF PIPING.

The following method of propagating Carnations and Picotees, by cuttings, without bottom heat, I received from Mr. Clark, who often urged me to adopt it as more certain than my own; but my constant reply was, that I found it impossible to use any other method than the one I pursued, from the multitude of cuttings we generally put in; and, moreover, that I had no reason to complain of any want of success in piping.

He was particularly fond of Picotees, with yellow grounds, for which my collection has been long distinguished; and it was owing to this circumstance that we

became acquainted, about twelve years ago, during all which time the most friendly intercourse has subsisted, and a frequent exchange of plants has taken place between us.

Having mentioned to him my intention of publishing a Supplement to my Treatise on Florists' Flowers, and that I should be obliged to him for any useful hints, or information, that he might think proper to communicate, he very kindly sent me the following written directions for piping, which I now beg to present to my readers; their value will be fully appreciated by the practical florist; and their adoption may be safely recommended to the young one.

The earth, for piping, should consist of a rather light, fresh, sandy mould, and old frame dung entirely decomposed; this should be passed through a fine sieve, such as will take out any small lumps of earth or little stones; and when used, it should be in a moist state. In dry weather it may be watered over night, before it is used; it will then settle much better in the pots, and require less water when piping. Nine No. 48-sized pots, will stand, when plunged in the earth, about three-parts of their depth under a common garden hand-glass, cemented and made sufficiently air tight. Let the pots be filled with the piping compost, and pretty well shaken down, by striking the pot upon the hard ground several times; then let the pot be again filled up to a cone-like surface, and pressed moderately down, leaving the earth convex in the middle of the pot. This done, water the pot of earth with a small and fine rosed watering pot, till it is saturated with water; this will be seen, when the water does not readily pass away; having repeated this again,

shake the pot gently and steadily on the ground three or four times ; the earth will then sink in the pot nearly to the rim, and have rather a muddy appearance ; let the pots then stand for an hour, or until the water has drained away, and left the surface tolerably firm, which will be discerned by a gentle pressure of the hand upon it. With this direction, let it not be supposed it is meant that the earth is to be hardly pressed into the pot ; for, if so done, it will be too hard for the tender fibres to issue freely ; neither is it intended that the earth should be made so as to run together, when shaken down ; for, if so, it must have a similar effect to that of filling the pot too firmly with the earth. These extremes must, therefore, be avoided ; and all that is here meant, is to let the earth be moderately firm in the pot, so that it may not sink from the bottom of the pipings when put in, and to be made only so moist that the pipings may require no more watering till they have taken root, and are removed under other glasses, to have air admitted to them, as is further directed.

The pipings having been cut, and placed in pans of water, while the pots have been standing to drain, and the earth to settle, take them out of the water singly, and after gently pressing the middle finger, damp with the water, from the pan, immediately upon the spot, where you are about to place the piping ; with the thumb and finger, gently force in the piping, but not too deep, and so as to leave the first grass of the piping even with the surface, and the piping standing firmly upon its bottom, in complete contact with the moist earth, and so continue to place the pipings as closely as the fingers may conveniently be passed between them. After the pipings

are put in, not one drop of water more should be put to them, as some recommend, and, as they say, to settle the earth to the pipings; because it must be evident, that any water put to them after they are in, will, as it sinks, unsettle the earth from the bottom of the pipings, and will have exactly a contrary effect to that of settling the earth to them.

In putting them in, should any piping be found to strike upon a small lump of earth, take it up again, and put it so as to avoid the substance; for although the earth be finely sifted, there will be some such; and if the piping hits upon it, its bottom will not stand so immediately upon the moist earth, as it necessarily must do to do well. Upon this I would lay the greatest stress, because long experience has entirely convinced me, that upon this principle, mainly, does the success of piping depend; and, surely, it will be readily conceived, that when the earth sinks from the bottom of the piping from any cause, its striking root is either very long delayed, or entirely prevented, for want of that moisture which is necessary for its support, till it has thrown out its fibres; but when the piping is so put in, that its bottom presses upon the moist earth, it will appear to grow immediately the glasses are put down close, and the air is excluded. When the piping is done, and the number of pots are finished for a glass, whatever may be the size, plunge the pots in earth as before directed; and the best method of doing this, is in a raised heap of mould, and not upon dung, consisting of a load or two, laid up two feet or more above the surface of the ground, and this in a situation where the pipings can have the sun early in the morning, and, also, in the evening; and

if so situated as to take some portion of the mid-day sun ; a single mat should be laid directly upon the glasses, and not raised above them, from nine o'clock in the morning, or earlier, if the sun is very bright, till four or five o'clock in the afternoon, or later, according to the heat of the sun ; taking care that the pipings be not too much exposed to the sun, so as to get withered. But if the sun is not sufficiently powerful to heat the glasses, they should be kept entirely uncovered, and always so during the night. If the pipings are thus managed, and the mats taken off in the evening, a fine moisture will arise under the glasses, so that they cannot be seen through, and will settle like a dew upon the pipings, keeping them in the growing state from the time the glasses are placed closely over them ; and this should be done as soon after piping as the pipings are quite dry, which they will be in about twelve hours, depending, in some measure, upon the weather, and the degree of air admitted under the glasses ; which should be placed over the pipings immediately the pots are finished, and plunged in the earth : an oyster shell, or broken tile, placed under the edge of the glasses, for the time, will answer the purpose of drying them. Exposing the pipings to a hot sun, so that the glasses get heated, with the view, as some say, to dry them, is not this something like making hay ? And can it want any argument to show the fallacy of such a practice ? For how can it be supposed, that the pipings, with nothing, perhaps, but only the moist earth around the bottom of them, can endure a hot sun, without being withered, more or less ? Or even if the joint is standing firmly on its bottom, as it should do, is it not a great mistake to imagine that

they can bear the sun, almost in any degree, before they have taken root? But at no time should the pipings have the sun, if it is at all bright, but through a single mat, while they are under the glasses. If the pipings contract mouldiness, it is from bad management; they will not be so, if the directions now given are strictly followed. When air is required, it should only be given in the evening, when the setting sun is nearing the horizon, and shines obliquely upon the pipings. The pipings will require but little attention, for a fortnight or so, after the glasses have been closely put over them, as described; when, if the pipings have grown, as they ought to have done, it will be extremely beneficial to take off the glasses for about a quarter of an hour before sunset, and to turn them upside down, and wipe them dry; and then, after having scarified the earth between the plants, put on the glasses closely as before; and this may be repeated at the end of a few days, or as occasion may seem to require, particularly if the weather is hot and foggy. After this, the pots of those pipings which have taken root, and this will easily be seen by their growth, should be taken from under the glass, and placed under other glasses, in a somewhat shaded place, and so as to have air admitted to them by degrees, till wholly exposed. It will easily be conceived, that the pipings, having been excluded from the air so long, the grass will, on its first exposure, be too tender to be wholly exposed without a glass, for any length of time; and that such a sudden transition, from complete exclusion, to a sudden exposure, cannot be right; and, indeed, the effect of such a change will be very perceptible; for if the glasses are wholly taken

off at once, after the pipings have been so long under them, the grass will become flaccid, and will not support itself; they should, therefore, be inured to the air by degrees.

Soon after the pots are thus removed from under the piping glass, but not till then, it will be requisite to give them a little water in the evening, and so occasionally; but when the plants are well established, let the pots be kept pretty dry, and then, in this state, they may be safely planted out singly, and they will scarcely feel the moving, if moderately watered, when so planted out; as some roots will sooner take root than others; it were as well, perhaps, to pipe but one sort in a pot, though it will often be found necessary to put several sorts in the same pot, where the stock of them is confined to a few pipings.

Now, though piping is thus advised, a person will hardly cut all his grass for this purpose, but rather leave a supply for laying, and thus have a double chance for his stock of plants: besides, in piping, he will have to put a number to every plant, if he takes his pipings sometime before they bloom; and, if he does so, they will certainly strike root the more readily. As to cutting the pipings, though it may be said there is not much art in this, nor much discrimination necessary, yet, it cannot be disputed, that there is a wrong as well as a right joint to cut to; nor is there much more doubt that the pipings should have two or three joints; and, generally speaking, perhaps, the second joint will be the proper one, if the grass is in a good state, and the joint is not green and succulent, neither too hard, but white, soft, and swelling; but this will not be the case with pipings

from a plant that is not free in its growth, nor with such sorts as naturally run long in the grass, or are drawn up by covering or otherwise; for the second joint of such will, probably, be green and too soft; and if cut at such joint, the piping will inevitably rot: with such pipings, therefore, the third joint must be chosen, for unless the joint is sufficiently matured, as described, it will not succeed. First, then, the grass of the piping should be stripped off downwards, so as not at all to break the joint, and then to cut clean and exactly to it, but not into it, leaving no part of the piping below the joint, as some have done; for such must decay up to the joint, and therefore can only impede its striking. In cutting the top grass of the piping, this should not be cut too short, but so as to leave the tender grass at the heart untouched; and not, as some do, divest the piping of the greatest part of the grass. The side grass may be left, so that when cut, and the pipings are put in, they may seem barely to touch each other; and the same observation as to cutting the grass, applies also to the layers. In about a week or ten days after the pipings have been put in, should there appear to be one or two, which do not throw out the grass as they should do, but, on the contrary, get flaccid and dry; such pipings, if they are of much value, and the stock is scarce, may be taken out of the pot, and the bottoms of them, and not the grass, placed in a little cold water in a wine glass for some hours, or till the pipings become stiff; they may then, without any more cutting, be put into a fresh pot, just as at first, when, if the pipings be sound, they may yet do well; but if the joint appear unsound, which may easily be discovered upon examination, instead of being

well cicatrized and clean, then the only chance is to cut to the next joint, if possible, and entirely pipe them afresh, as at first. By this practice, piping may, without exaggeration, be said to be somewhat certain.

Again, as to layers, these are sometimes inconsiderately put down, when the bottom of the plant, to which they belong, is in part decayed ; and when this is so, for want of support from the plant, the layers will die, if suffered to remain ; but, by piping, this may be prevented. Before the time of laying, therefore, the plants should every one of them be closely examined ; for although the plant, upon a cursory view, may appear to be in a good state, and may show for bloom tolerably well, yet, it frequently happens, that the stem, from whence the layers immediately grow, or, perhaps, below them, is in an unsound state ; and when this is the case, the layers should directly be taken off and piped. By pressing the bottom of the stem below the layers, if unsound, this, it is easily discovered by the eye, will appear swelled or enlarged, and will be found to be spongy and hollow, although the grass may seem to be in good health ; and when this is so, it is quite useless to lay them ; for if laid, they will die, if they are so left as layers : Or should it happen, that some layers, after having been laid, are injured by the wire worm, and not noticed till the grass is seen to flag, by piping they may, if they are of value, still be saved ; for if somewhat withered, and yet not too far gone, by putting them in cold water from the pump, for some hours, or even for a day, after cutting off the woody part, they will become stiff, and then may be piped. The layers, too, may, in this manner, be often preserved ; if, then, they are seen to flag, from having been broken

off in the laying, and they are not neglected too long. And now, should it be said, that the method of piping, here recommended, is attended with too much trouble, and that those, who pipe on a large scale, will not be able to pipe a sufficient quantity in this way, I can only reply, that supposing there are not quite so many piped thus in pots, as are, in the usual way, put under a glass, yet, if more plants be obtained, by this method, is it not something like prejudice not to adopt it?

A SUMMARY,

Or brief enumeration of some of the most important points to be attended to, in the management of Carnations; the careful perusal of which, occasionally, will serve to refresh the florist's memory.

The best time for potting, or planting out for bloom, if the weather be favourable, is the last week in March, or the beginning of April; the compost to be properly mixt, and put under cover a month previous, to get it in a dry working state. The plants, also, to be hardened by a full exposure to the weather a week or two before; nothing is gained by potting earlier, unless you have the convenience of frames to shelter them by night, and to screen them occasionally from bleak east winds by day. Yellow Picotees always require to be sheltered, for a time, in this manner, when first potted.

Put a portion of rotten dung over the bits of broken tile, at the bottom of each pot, with a few coarse riddlings of mould; then fill the pots three-parts full of the prepared compost, and fix the plants carefully and firmly in the centre; fill up with a part that has been screened,

and shake the pot once or twice smartly on the boards, to settle the mould, taking care not to plant too deep, or to bury any part of the foliage ; leave the surface smooth ; the dung, below the plants, will retain moisture after each watering, and afford nourishment in the time of flowering, when they require it most. After you have done, set the pots upon two long narrow rails, an inch and a half square, along the side of the walks in the open part of the garden ; the rain will then pass through more readily ; the worms will be unable to enter, and there will be no danger of any stoppage or accumulation of stagnant water in the pots to rot the roots, as often happens from their resting on the damp ground. Here they may remain, without further notice, till the first week in June, when it is required to strip off all dried or damaged leaves near the roots, to weed the pots carefully, and to scratch over the surface, previous to their top dressing, with a mixture of one-third old sheep or cow dung, one-third rotten frame dung, and one-third mould ; the same to be screened and well mixt.

By the middle of June the plants will begin to spindle, and shoot up for bloom, and require sticking ; train the stems to the sticks, whose length, for strong plants, should not be less than four feet, and tie them carefully with slips of wet bass.

In the beginning of July many of the plants will have acquired firmness and consistency, sufficient to commence piping ; take off such cuttings as cannot easily be laid down, and set them upright, with their respective tallies, when cut, two inches deep, in a pan of water ; this prevents their weltering, and they cut the better for it ; as the piping, in this case, will be before the bloom,

affix a separate tally to every plant, to prevent the disappointment of run flowers; cut just below the second or third joint, according to the strength of the grass, and touch not the leading shoots. The pods, or flower buds, will now have begun to form, when you must strip off all but two on each plant; in case of a large and very full flower, you may leave three, never more; a cluster of small pinking flowers is of no use, or credit, to any one. When the pods are fully formed, and ready to open, tie them round with bass, to prevent their bursting on one side; they will want looking after, from time to time, till the flower has fully expanded; some of the ties or bandages will require to be eased, or tightened, or removed, and fresh ones put on; this work must not be done carelessly or slovenly, if you intend to exhibit for any prize; as soon as the flowers begin to open, and before they drop their guard leaves, cover them with glass or paper caps; for the tender leaves of the flower, if left exposed to the rain and a hot sun, soon get tarnished and damaged.

When the flowers have opened for a few days, and the outer petals have expanded all round, again examine and ease the pods, where it is required, and put on the cards to keep them in their form, and fix them with wires to the sticks, to prevent their hanging down, or being blown about by the wind; this will enable the blossoms to preserve their shape, and to support their leaves to the last, even after the cards are removed, and when they are cut to be exhibited at any prize show; and the less the blossoms are exposed to the sun, when blown, the brighter and more vivid will be their colours. As the Carnations generally come into flower about the middle of July, con-

time to propagate, by cuttings, as they shew colour, and persevere till you have done ; the best compost for which is leaf mould and fine drift sand, with a small portion of sifted mould, and well decayed frame dung that has lain for two years.

As the preservation of your Carnations is the chief business that ought to engage your care, and as skilful propagation is the only means of accomplishing it, learn to perform this part well.

As the pods are forming and coming into flower, and all the time they continue in it they require a copious supply of soft water, never suffer them to flag for the want of it. I prefer giving it, at this season, through the pipe of the watering pot instead of the rose. Now is the time to stage the plants, and to range them according to their height and colours along the platform, prepared ready to receive them, and where they are to remain till they have done flowering.

Put on the cloth or awning also, to shade the blossoms, as well as to shade yourself, which it does, most agreeably, from the fierce rays of a July sun, and to protect them as well from the wind and rain. When the flowers begin to fade, prepare to lay them, by shortening the side grass, and getting the pags in readiness : fern pags, if the fern can be easily got, and which, with care, will last two years, are the handiest and soonest made ; and thin narrow bladed budding-knives, with their long ivory handles, are the best to operate with.

Water the plants well over night, and in the morning disturb the surface lightly, and cover it with a little fresh compost of one-third garden mould, one-third rotten frame dung, and one-third leaf mould, with a good por-

tion of dried road grit or drift sand. Take your seat astride of a common form, set the pot before you, and steady the layers with your left hand, resting the back of your right hand on the edge of the pot, and holding the knife upwards between your two fore fingers and thumb; then, with a steady hand, and correct eye, cut upwards quite through the middle of the second or third joint from the top; the cut may extend a full quarter of an inch beyond the joint; if the joints are wide apart, always take the second; remove the leaves that ensheathe the joints, and shorten the nib just below them; be careful not to break off the layers in pegging them down, and cover the joints three-quarters of an inch deep; when you have cut and laid the whole, give the pot a gentle shake, and leave the surface smooth. If the weather be very dry and hot, let the awning down for a day or two, next the sun, to shelter them, or remove them into the shade: water them, in the evening of the day following, with a fine rosed pot, and repeat it afterwards as often as necessary. Laying is a very important operation to a florist, and it ought to be done well, and completed by the middle of August.

The Seed of a fine Carnation is always desirable, but is not attainable every year; for if rainy weather should chance to set in, for a week or ten days, just as the blooms begin to wither and decay, decomposition follows so rapidly from their imbibing the wet, and retaining it in the cup, which incloses the ovarium or seed vessel, that the whole soon gets mouldy and rots; but if the weather continues fair and hot, at this critical time, namely, the month of August, and you will be at the pains to pluck out carefully the dying petals from the

cup, a narrow part of which may be torn down to the base, and cut off to prevent the wet lodging; you will then stand a good chance of saving seed; this is the method we invariably pursue, and the result has always proved successful, more or less.

The pipings and layers, if not neglected, will be fit to be taken up and potted towards the end of September, and the first week in October; put two plants in a 48 pot, or three, according to the nature of their growth, and single plants in 60 pots. Pot them lightly, and do not bury any part of the foliage, neither bruise the tender roots by hard pressure; set them in a frame upon boards, or on six inches of coal ashes, trodden hard, and water them, the next day, with a fine rose, to fix and settle the mould round the roots; the frame may be shut down close for two or three days, till they have struck fresh roots, and recovered from their transplanting; afterwards give them plenty of air, and full exposure in all suitable weather: as continued and heavy rains frequently fall in October and November, to which it would be improper to expose them by taking off the lights, admit air in front, and raise the frame on bricks, to receive a current of it below; this keeps the plants healthy, and prevents those purple spots on the leaves, the sure indications and forerunners of disease, which is engendered by dampness and close confinement; the bricks may remain till severe frost sets in. If the plants become troubled with the green fly, which is the case often, at the beginning or close of a wet Winter, smoke them with tobacco in the frames; this will readily destroy them. The last thing which remains to be observed, is, pick off all decayed leaves, some

time in January or February, and clip off the damaged and unsound parts, when they will be ready for repotting in the Spring.

The following *Catalogues of Carnations and Picotees*, comprise nearly all the *Varieties* in my Collection, at the present time.

CARNATIONS.

SCARLET BIZARRES.

Addenbroke's King.
 Ashworth's Conquering Hero.
 Barr's King William IVth.
 Barnett's Dr. Medwin.
 Bates's George IVth.
 ——— Oxford Hero.
 ——— Sir Harry.
 ——— Marquis of Chandos.
 ——— Duke of Clarence.
 Bray's Canonbury Defiance.
 Cartwright's William IVth.
 Christian's King William IVth.
 ——— Lord Milton.
 ——— Pageant.
 Cooper's High Admiral.
 Costin's Monarch.
 Ely's Mayor of Ripon.
 Farrer's Huntsman.
 Fletcher's Lord Stanley.
 ——— Duke of Devonshire.
 Glover's Regulator.
 Gould's Duke of York.
 Gray's Devonshire Hero.
 Hall's Champion.

Hall's Glory of England.
 ——— Tarrare.
 Hill's Duke of Leeds.
 Hodges's Jupiter.
 ——— Columbus.
 ——— Navarino.
 ——— Prince George.
 Hogg's Lord Calthorpe.
 ——— Lord Sandon.
 ——— Achilles.
 ——— Sir Abraham Hume.
 ——— Captain Custance.
 ——— Mars.
 ——— Julius Cæsar.
 ——— Oliver Cromwell.
 ——— Romulus.
 Hopkins's Grenadier.
 Housman's Kinfare Hero.
 Hoyle's Duke of Leeds.
 Hufton's Duke of Wellington.
 ——— Squire Sitwell.
 ——— Lord Lincoln.
 Humphrey's Duke of Clarence.
 Ives's President.

Jackson's King.
Jaques's Platoff.
Kellner's William IVth.
 ——— Marquis of Anglesey.
Langdale's Highland Boy.
Manning's Glory.
Martin's Conqueror.
 ——— Lord Lieutenant.
Mason's Achilles:
 ——— Sir Robert Peel.
 ——— John Bull.
 ——— Captain Spencer.
Moore's William IVth.
Pearson's Lord Bagot.
Power's Duke of Wellington.
 ——— Victorious.
Pyke's Champion.
Prior's Lord Hill.
Roby's Salamander.
Rowbottom's Victory.
Salthouse's Bolivar.
Smalley's Lord Althorp.
 ——— Foxhunter.
Snook's Defiance.

Strong's Duke of York.
 ——— King.
 ——— Albion.
Squire's Defiance.
Tate's Rover.
 ——— Friday Night.
Thompson's Squire Cartwright.
Timmis's Rowton.
Turner's Blucher.
Turton's Firebrand.
Walker's Pageant.
Walmsley's William IVth.
Waterhouse's Rising Sun.
 ——— Dr. Syntax.
Wilde's Perfection.
Willmer's Conquering Hero.
Wood's President.
Woolridge's King.
 ——— Satisfaction.
Yates's Valiant Hero.
Yeomanson's Metropolitan.
 ——— Triumphant.
Young's Mount Ætna.

CRIMSON BIZARRES.

Barr's Queen Adelaide.
Barnett's John Bull.
Bates's Pre-eminent.
Birtle's Model.
Brooks's Lord Eldon.
Buck's Lord Bagot.
Butcher's Jolly Tar.
Cartwright's Rainbow.
 ——— Weaver.
Christian's Magnificent.
 ——— Miss Hogg.
Clarke's Magnificent.

Davey's Rainbow.
Firth's Virginias.
Furze's Enchanter.
Gregory's King Alfred.
Hall's Sultan.
Harley's Diana.
Hewitt's George IVth.
Hogg's King Arthur.
 ——— Lord Goderich.
 ——— Lord Chesterfield.
 ——— Plutarch.
 ——— Lord Clare.

Hogg's Hamlet.
 Holliday's Sir Robert Gunning.
 Hufton's King William IVth.
 ——— Lord Holland.
 Huggin's Brilliant.
 Ives's Prince Leopold.
 Jaques's Georgiana.
 Lacey's Waterloo.
 Lee's Duke of Kent.
 ——— Eleonor.
 Lichfield Minster.
 Malpas's Navarino.
 Medwin's Lord Eldon.
 Messenger's Sir G. Robinson.
 Martin's King Arthur.
 ——— Colossus.
 ——— Lord John Russell.
 Orson's Duke of Clarence.
 Phillips's Lord Harrington.
 Pittman's Rising Sun.

Potter's Sir William.
 Smith's Lady Grey.
 Strong's Linnæus.
 ——— Sir Joseph Banks.
 Taylor's Birmingham.
 Terry's King.
 Troup's Eclipse.
 ——— Magnificent.
 Turner's Duke of Devonshire.
 Wakefield's Paul Pry.
 Wilde's Bang Europe.
 Wood's King William IVth.
 ——— Bradford Hero.
 ——— Queen Elizabeth.
 ——— Sir Walter Scott.
 Woodhead's Spitfire.
 Wright's Albion.
 Yeomanson's George IVth.
 Young's Earl Grey.

PINK AND PURPLE BIZARRES.

Aiton's Pre-eminent.
 Bates's Dr. Buckland.
 Christian's Miss Wonfor.
 Davey's Lady Grey.
 Franklin's Queen of Hearts.
 Gould's Prince George.
 Gill's Bristol Hero.
 Hogg's Dulce Decus.

Hogg's Marquis of Douro.
 Hufton's Lady Lincoln.
 Jaques's Iris.
 Mortlock's Duke of Sussex.
 Strong's Princess of Denmark
 ——— Dr. Franklin.
 Troup's Pimate.
 ——— Traveller.

PURPLE FLAKES.

Ashworth's Memnon.
 Bates's Wellington.
 ——— Sir James Plaistin.
 Brookes's Duke of Beaufort.
 Castle's Mrs. Barrington.

Christian's Mary Christian.
 Costar's Squire Clark.
 Crick's Hero.
 Ely's John Wright.
 Franklin's Dr. Franklin.

Fulbrook's Grenadier.
 Hall's Duke of Norfolk.
 Hill's Reformer.
 Hogg's Mrs. Siddons.
 ——— Lord Tenterden.
 ——— Queen Adelaide.
 Honey's Princess Charlotte.
 Hufton's Princess Victoria.
 ——— La Belle Alliance.
 ——— Mrs. Godfrey Mundy.
 Kenney's Excellent.
 Kershaw's Royal George.
 Knott's Alfred the Great.
 Leighton's Bellerophon.
 Maltby's Emma.

Martin's President.
 ——— Miss Wake.
 Palmer's Defiance.
 Phillips's Britannia.
 Pyke's Dulcibella.
 Strong's Esther.
 ——— Eliza.
 Taylor's Lady Mansfield.
 Timmis's Lord Byron.
 Turner's Princess Charlotte.
 ——— Miss Wilkinson.
 Willmer's Defiance.
 Wood's Lord Wentworth.
 ——— Commander.

SCARLET FLAKES.

Addenbroke's Duchess of Kent.
 ——— Lydia.
 Bates's Ignescens.
 Booth's Independant.
 Brown's Bishop of Gloucester.
 Faulkner's Salamander.
 Fletcher's Lord Anson.
 Furze's Duke of Bedford.
 Hall's Captain Sleigh.
 Harley's Enchanter.
 Hodges's Bright Phœbus.
 Hogg's Lord Hill.
 ——— Hudibras.
 ——— General Clinton.
 ——— Rouge Dragon.
 ——— Momus.
 ——— Vulcan.
 Holmes's Baron Weber.
 Hufton's Magnificent.
 Knott's Ajax.

Lee's Ruby.
 Leighton's Atlas.
 Manning's Defiance.
 Martin's High Sheriff.
 ——— Phoenix.
 ——— Meteor.
 Maud's Rowton.
 Moore's First West York.
 Orson's Rob Roy.
 Pearson's Rising Sun.
 ——— Madam Mara.
 Plummer's Waterloo.
 Page's Queen Caroline.
 Smalley's Sparkler.
 Stearn's Dr. Barnes.
 Stoniard's Britannia.
 Tate's Queen Adelaide.
 Taylor's Festival.
 Thornicroft's Rubens.
 ——— Blucher.

Tomlinson's Duke of Rutland.
 Turner's Jupiter.
 Wharton's Phoenix.

Wilson's Mountaineer.
 Wood's Basilisk.
 ——— Comet.

ROSE AND PINK FLAKES.

Bates's Duchess of Kent.
 ——— Princess Victoria.
 Clarke's Lady Farnham.
 ——— Lady Crew.
 Clegg's Smiling Beauty.
 Crook's Roi de Roses.
 Colcutt's Lady Grey.
 Davey's Lady Shannon.
 Dawson's Lady Orde.
 Dobbin's Mountaineer.
 Faulkner's Eliza.
 Fletcher's Duchess of Devon-
 shire.
 Hall's Lady Coville.
 ——— Lady Scarsdale.
 Harley's Mrs. Clarke.
 Hird's Belvidera.
 Hogg's Lady Sophia Cust.
 ——— Lady Petre.
 ——— Miss Howard.
 ——— Julia.
 ——— Isabella.
 ——— Paddington Beauty.
 Hufton's Queen Adelaide.

Jaques's Phœbus.
 Lacey's Princess of Wales.
 Langsdale's Cottage Maid.
 Lee's Maria Louisa.
 Malpas's Circassian.
 Martin's Lady Euston.
 ——— Mrs. Bouverie.
 ——— Eliza.
 Mason's Lady Hamilton.
 Norris's Queen.
 Plant's Lady Hood.
 Pollit's Triumph Royal.
 Power's Lady Jane Peel.
 Redfern's Miss Ward.
 Smalley's Wonderful.
 Strong's Princess Augusta.
 Willmer's Timandra.
 Wood's Royal George.
 ——— Rosabella.
 ——— Lady Sparrow.
 Woodhead's Mary Neale.
 Yates's Supreme.
 Yeomanson's Magnum Bonum.
 Young's Amanda.

FRENCH CARNATIONS.

SCARLET BIZARRES.

Bijou de Clermont.
 Bonaventure.
 Bonpland.
 De Marengo.

Duc d'Orleans.
 Duc de Nemours.
 Empereur Titus.
 General Valazé.

General Lobau.
Grand Turc.
Marshal Soult.
—— De Biron.
—— Turenne.

Napoleon.
Roi de Capucins.
Roi Pepin.
Talma.

CRIMSON AND PINK BIZARRES.

Beauté Virginal.
Fenelon.
La Renommée.
La Douceur.
Marie Antoinette.
Marshal Gerard.

Pont de Lodi.
Princess Marie.
Pucelle de Gand.
Richesse de Roses.
Roi Dagobert.

MEDINA BIZARRES.

Adèle.
Belle Zoraïde.

Ildephonse.
Rousseau.

PURPLE FLAKES.

Baron Cuvier.
Bossuet.
Cordon Bleu.
Julia.
Le Roi de Violets.

Madame de France.
Prince de Nassau.
Victoire.
Voltaire.

SCARLET FLAKES.

Brillant.
Comte de Segur.
Feu très vive.
Feu de Burges.
Fournaise de Vulcain.
General Haxo.

Henri Quatre.
Jazelle.
L'Incomparable.
Marmont.
Prince Charles.
Triomphant.

ROSE FLAKES.

Coquette de Paris.
Cybèle.
Herodias.
Jean Sisley.
Josephine.
La Joyeuse.
La Reine de Roses.

La Comtesse d'Artois.
L'Agrément.
Mademoiselle d'Orleans.
Maria Louisa.
Princesse Clementine.
Rose Superbe.

CHERRY AND MAROON FLAKES.

Chloe.
L'Agréable.
La Reine de Hongrie.
La Fleur du Pape.

Le Roi des Noirs.
Le Roi de Cerises.
Queen of Bohemia.

BLUSH AND WHITE.

Abbess of St. Clair.
Puretè.

Sœur Blanche.
Vesta.

PICOTEE.

By dint of culture, and perseverance in sowing seed, the Picotee has been improved, in a wonderful degree, since I first invited the attention of florists to this flower, thirteen years ago; the cultivation of it has become as general as that of the Carnation; and the same prizes and rewards are now adjudged, in every Floricultural Exhibition, to those who produce the finest blooms, which are classed under the heads of Purple, Red, Scarlet, Rose, and Yellow; and are further distinguished, as heavily feathered, lightly feathered, lined or striped, spotted, and edged round the margins of the petals.

My sale of them seems to keep equal pace with that of Carnations. Even the humble Pink grower has made a step in advance, and deigned, at length, in proof of more exalted taste, to cast his eyes upon the Picotee, wondering why he had remained so long blind and insensible to its beauties. In several places, where Pink shows only were held, Picotee exhibitions for prizes have been established likewise.

The last Summer being rather favourable for ripening and producing seed, I expect a large addition will be made to the numerous varieties we have of it already; and that the dainty and curious amateur will be enabled to gratify his taste more fully, be it ever so difficult to please. I have the satisfaction, myself, of stating, that, last year, several yellow Picotees, variegated with different colours, and raised from seed, ripened in my own garden, flowered for the first time; and that, about a dozen, which I have selected, are quite equal to any that I have ever received, either from France, or Germany. I hope, that, in the ensuing Autumn, I shall be able to spare a few plants of them. The seed of yellow Picotees will not produce all the flowers raised from it with a yellow ground; I have frequently found many of them come with a white one.

ENGLISH PICOTEES (RED.)

Annesley's Goliath.

— Achilles.

Bambury's Duchess of Beaufort.

Baron's Miss Neville.

Bates's Queen Anne.

Brown's Duke William.

Cartwright's Queen Adelaide.

Cornfield's Lord Exmouth.

Douglas's Lady Selkirk.

Gibbon's Elegant.

Hird's Alpha.

Hodges's Strensham Beauty.

Hodges's Alfred.
 Hogg's King William.
 ——— Lady Harrington.
 ——— Lady Clanricarde.
 ——— Britannia.
 ——— Corinna.
 ——— Rufus.
 ——— Tulliola.
 ——— Maria.
 ——— Bellona.
 ——— Diana.
 Hufton's Will Stukely.
 ——— Miss Ray.
 ——— Firebrand.
 ——— Lord Chesterfield.
 Kenney's Incomparable.

Martin's Prince George.
 ——— Lord Hill.
 ——— Princess Victoria.
 ——— Majestic.
 ——— Transparent.
 ——— Eminent.
 Maw's Willows.
 Mayor of Northampton.
 Pearson's Chilwell Beauty.
 Pyke's Defiance.
 Russell's Incomparable.
 Sandall's Litchfield Hero.
 Spratt's Earl of Effingham.
 Wood's Champion.
 ——— Comet.
 Woollard's Miss Bacon.

PURPLE.

Annesley's King William.
 ——— Lord Norreys.
 ——— Lord Hill.
 ——— Bletchington Hero.
 Boothman's Princess Victoria.
 Box's Madam Tooley.
 Cornfield's Duchess of Bedford.
 ——— Beauty of England.
 ——— Marchioness of Bath.
 Douglas's Prince Leopold.
 ——— Mary Ann.
 Ely's Elizabeth.
 Faulkner's Caledonian.
 Fletcher's Maria.
 Gibbon's William IVth.
 Hodges's Priscilla.
 Hogg's Lady Acland.
 ——— Andromeda.
 ——— Duchess of Leeds.

Hogg's Pompadour.
 ——— Lavinia.
 ——— Lady Brownlow.
 ——— Lady Rolle.
 ——— Minstrel.
 ——— Niobe.
 ——— Tamerlane.
 ——— Penelope.
 ——— Miss Annesley.
 ——— Pulchella.
 ——— Galatea.
 Horwood's Fair Ellen.
 Hufton's Lady Middleton.
 ——— Isabella.
 ——— Drusilla.
 ——— Naomi.
 ——— Miss Willoughby.
 ——— Miss Willmot.
 Jeeves's Moon-raker.

Jeeves's Beauty.
 Lee's Cleopatra.
 ——— Duchess of Rutland.
 Martin's Queen of Violets.
 ——— Queen Adelaide.
 ——— Linnaea.
 ——— Mrs. Gunning.
 ——— Complete.

Martin's Emma.
 Mason's General Mina.
 ——— Princess Charlotte.
 Smith's Country Girl.
 Townsend's Fair Rosamond.
 Wood's Lady Sandwich.
 ——— Agrippina.
 ——— Enchantress.

ROSE AND PINK.

Cornfield's Lady Miller.
 Fair Maid of Perth.
 Hogg's Lady Clare.
 ——— Lady Louisa Lygon.
 ——— Marchioness of Ormonde.
 ——— Countess of Verulam.

Hogg's Clarissa.
 Lee's Fair Rosamond.
 Purchas's Matilda.
 Wood's Andromache.
 ——— Orphelia.
 ——— Triumph Royal.
 ——— Lady Lake.

SCARLET.

Clark's Mrs. Welbank.
 Hogg's Duke of Athol.
 ——— Ensign.
 ——— Smilax.

Purchas's Granta.
 Racster's Miss Martin.
 Stone's General Picton.

FOREIGN PICOTERS.

Adelaide.
 Amie.
 Angelica.
 Blandine.
 Brunhilde.
 Cornelia.
 L'Amiable Rosette.

Le Souvenir.
 Marshal Bulow.
 Paganini.
 Pythagoras.
 Queen of Wurtemberg.
 Solon.

PICOTERS WITH YELLOW GROUNDS.

Agamemnon.
 Albion.
 Alcyon.

Apollo.
 Ambrosia.
 Amicus.

Amour.
 Amurath.
 Artabanes.
 Aspasia.
 Asor.
 Baron Ompteda.
 Belle Bergère.
 Berenice.
 Celestina.
 Charles X.
 Commandant.
 Croesus.
 Cynthia.
 Daphne.
 Dieudonnée.
 Donna Maria.
 Duc de Chartres.
 Eliza Mouchon.
 Emir.
 Emperor of Austria.
 Erasmus.
 Fatima.
 Ganges.
 Gloria Florum.
 Golden Eagle.
 Guido.
 Heroine.
 Hindoo.
 Indica.
 Jason.
 Jupiter.
 King of Sardinia.
 King Priam.
 King Leopold I.
 Louis Philippe.
 La Reine de Belges.
 La Reine de François.

La Marquise.
 La belle Jersoise.
 La Moderne.
 Le Grand Amiral.
 Le Papillon.
 Le Triomphant.
 Le Jeune Lubin.
 Leonidas.
 Musæus.
 Mademoiselle Fries.
 Marjolin.
 Madame Sauveton.
 Napoleon.
 Octavia.
 Orpheus.
 Orlando.
 Osmida.
 Pactolus.
 Perseus.
 Pharamond.
 Phidias.
 Phoenix.
 Prince Maximilian.
 — — Eugene.
 — — Arthur.
 — — De Condé.
 Princess of Sweden.
 — — of Orange.
 — — Paulina.
 — — of Brazil.
 Prinz Otho.
 — — von Oranien.
 Publicola.
 Pulcheria.
 Pyramus.
 Queen of Bohemia.
 — — of Bavaria.

Rajah Rammohun Roy.
 Raphael.
 Reine de Golconde.
 Romulus.

Rosalie de Rohan.
 Rose d' Or.
 St. Dennis.
 Sultan Mahmood.

OF THE AURICULA.

The Auricula, one of the early and favorite flowers of Spring, still continues to be very generally cultivated, and many new varieties of it are produced every year from seed, though it takes some time before they get abroad; the florist who has been lucky enough to raise a fine flower, is seldom inclined to part with any of it, till he has been enabled to increase it to ten or a dozen plants, which are generally sold out at one appointed time; for unless he can make something by it, at the beginning, to remunerate him for his trouble, he will have little chance of doing it afterwards; some plants throw out offsets freely, and are easily propagated, while others do it very slowly; so that it often takes four or five years of careful culture to raise even six plants of some kinds; this is one reason why Lee's Colonel Taylor, and Hedges's Britannia still continue dear and scarce; they produce so few offsets; added to which, plants of Colonel Taylor seldom survive the fifth or sixth year. I am not aware that any other flower has had half the pains and trouble bestowed upon it as the Auricula, in regard to compost; experiment after experiment has been tried, and the combination and commixture of every known soil and manure have been made a hundred different ways; nor do I know that the result of any one experiment, after all, has been conclusive and satisfactory; there seems a capriciousness in the Auricula, at times, with regard to

its nourishment, for which no one can account; for in the same kind of soil, in which it has thriven and flourished two or three years, it will, if the same compost be long continued, often languish and decay, without any apparent cause; this has made me less particular about both the precise quantities and qualities of the different ingredients, commonly used; nor do I find it necessary to mete them out with that exact proportion which my late brother florist, Emmerton, used to impress upon me, at the time I assisted him in the writing and compilation of his Treatise; this was the beginning or dawn of my Auricula fancy, eighteen years ago; and I have cultivated them with tolerable success ever since, though in a situation by no means suited to them, being too much inclosed and confined in the midst of coal-smoke, and in the want of a free and brisker circulation of pure air.

ISAAC EMMERTON AND HIS COMPOST, &c.

The ingredients which he recommended, for the most part, are of a nature too filthy and offensive for general adoption, as well as too tedious in preparation, and very prejudicial, if used prematurely; but nothing could ever shake his belief in their excellence, power, and efficacy. Emmerton used to say, "My father used them, and I used them after him, and made improvements upon them; and nobody grew Auriculas better;" and it is but justice to add, that the Auriculas, which the florists about Barnet, Totteridge, and Finchley, exhibited at that time, Kenney and Emmerton in particular, have not been surpassed, if equalled, by those of any florist of the present day; they were remarkable for their bold trusses, broad *expanded pips* of brilliant colours, strong stems, and

large fleshy foliage; indisputable proofs of good culture.

The consistency of the mould ought to be, in some degree, regulated according to the nature of the situation in which they are grown; if the place is low and damp, the compost should be light, free, and open, and not too retentive of moisture; it should likewise not be compressed too closely round the plants in the pots, that, after rain or watering, it may dry again in a reasonable time; the only part of the year in which they can receive and discharge any great supply of either, with advantage, is the latter part of February and March, when they are in a quick growing state; and in April, when in flower: if the roots are kept too wet, and damp, long together, at other times, the foliage soon shews it, which changes to a pale sickly green: but, in elevated situations, where the air is brisk, and the moisture soon dries up, and where the plants require to be watered more frequently, the compost may be of a closer body, embracing a larger portion of loam in its composition; and the plants themselves may be more firmly potted, according to the instructions given by Emmerton, as suited to the high ground of Finchley and Barnet, or other open and exposed situations. Auriculas have been often suffered to remain on the ground, in those places, exposed to the weather, from May till Michaelmas, without sustaining injury; the only precaution taken, was keeping the worms out of the pots, by setting them on tiles, slates, or coal ashes; but this, I know, that if mine were left so exposed, situated as I am, and the Summer should turn out wet, I might expect to find half of them rotten by that time; so widely different is

the mode of treatment, that ought to be observed in the two situations referred to.

Though Emmerton certainly grew his Auriculas well at Barnet, and though he used full one-fourth of strong yellow loam with his hot manures of sugar-scum, night soil, blood, &c. ; yet, notwithstanding his vain boasting, they were never long-lived with him ; he was sending for fresh plants from the country almost every year, more or less, to keep up his stock ; he never sold any at that time ; he might, perhaps, exchange or give one away occasionally ; but he grew them entirely to gratify his own fancy. When he was obliged to leave his nursery at Barnet, in consequence of his having libelled the parson of his parish, a magistrate withal, by hanging him in effigy on a tree in his garden, near the public road ; and for which offence he was indicted, and suffered a year's imprisonment in the King's Bench ; he, after this, removed to Paddington, and occupied a small nursery and flower garden near me ; where he continued for awhile to grow Auriculas, along with other plants, for sale ; but he was far from being successful with them ; he complained, by way of excuse, that he had not got his compost in right order, and that the London air did not seem to suit them ; he at last gave it up, as he was neither likely to gain either credit or advantage by the pursuit ; and sent a few of his best flowers to be taken care of by Mr. Moore, of Finchley.

Emmerton, after he had published his treatise, was looked on as a Professor, qualified to give instructions in the art and mystery of Auricula growing ; and was invited, by some of the new beginners, to superintend, occasionally, the management of their flowers, that they

might benefit by witnessing his practical skill and dexterity in mixing compost, in trimming the roots of the plants, and in fresh potting them, as well as in thinning out the young formed pips, and flattening and arranging them in the truss, when fully expanded ; he considered himself a perfect adept in this respect ; and fully entitled to his fee, of a dinner, and a glass of grog ; his discourses, and the recital of his feats in *Auricula* growing, and of the prizes he had won, were, it is true, sometimes rather tedious and fatiguing to those who had heard them before ; but to his pupils and young florists, who wished to profit by them, the theme and the subject were, I believe, always pleasing, and listened to with attention.

THE UNLUCKY PUPIL.

There was a person residing at Newington, belonging to the India House, whom Emmerton had imbued, and inoculated with the *Auricula* fancy, and who entered into it with spirit, and purchased at least one hundred plants of the best sorts then in cultivation ; he likewise had got enrolled a member of a Flower Society in that neighbourhood, and felt almost confident, under Emmerton's auspices and tuition, of winning the first prize, the silver cup ; but unlooked for accidents will often mar the best laid projects, and occasion disappointment. Good compost was a particular object of solicitude with both of them ; and as Emmerton contended, that, without bullock's blood, and goose-dung, they would stand no chance ; now, as the latter was a species of manure very difficult to be obtained in that quarter, he persuaded

his pupil to commission some country waggoner, out of Sussex, to bring him, at Midsummer, two geese and a gander; which, according to Emmerton's calculation, would produce dung enough by Christmas, (to last him two years,) when they would be fat and fit to kill, and well adapted for good fare, wherewith to treat his friends at that joyous season. This project was soon put in execution; the geese were brought to town, and cooped up in a corner of his small garden, which might be ten yards long, by five wide. Every thing was going on smoothly; the plants grew, and the dung accumulated; only the man's wife complained of the filthy smell, arising from the heated and fermenting dung, than which nothing can be more offensive; but Emmerton promised soon to remedy that evil, by covering it with loam; notwithstanding, as the dung increased, and was stirred up with the blood, the fermentation and stench increased too, and became so intolerable, that the women living at the two adjoining houses joined their complaints with hers, and abused him whenever he made his appearance; and they all insisted upon its being instantly removed; threatening him with their immediate vengeance, in case of refusal. Emmerton, finding the storm gathering in right earnest, judged it prudent to decamp; telling them, that the London ladies were too fine nosed by half; but he never dared to repeat his visits after.

This was only a prelude to the vexation which the gentleman had to experience himself; one day, when absent at his office, the door of the coop was by some means left open, and the geese, finding themselves at liberty, waddled about the garden unnoticed; and having been deprived of grass and green meat so long, fell upon

the Auriculas in the frame, pecked, bit, and pulled them out of the pots, and trod over, and spoiled them so completely, that they were of little worth afterwards. One of the geese was killed, and eat at Michaelmas; and would, no doubt, have met this fate, whether the said offence and trespass had been committed or not; the two others were stolen a day or two after; this sad mishap deprived the owner at once of all hopes of the silver cup, and inflicted upon poor Emmerton the certain loss also of many a good dinner on a Sunday; when, unfortunately for him, a dinner was an object of no trifling importance.

DIFFICULTY OF OBTAINING YELLOW LOAM IN LONDON.

From the inclosure of waste and common lands, and from the prohibition of the Lords of the Manors of others not yet enclosed, as Old Oak Common, and Wimbledon, there is great difficulty in procuring pure native loam round London; I, as well as many other florists and nurserymen, have been lately under the necessity of sending for it as far as Waltham Flats, and Wanstead Common, at considerable expense; this loam is of a yellow cast, of too free and unsubstantial a texture for Carnations or Tulips; yet very suitable for Auriculas, and many other plants; it seems free from any sour or deleterious quality, arising either from stagnant water, or rust of iron.

In order to preserve our Auriculas in a sound healthy condition; I have judged it requisite, of late years, to make some alteration in the compost, and to form it of more simple, and less powerful ingredients; the effect

has been, that they have flowered equally as well, whilst we have preserved our plants better; we no longer have recourse to sugar-bakers' scum, blood from the slaughter-house, pigeons' dung, and the like; for, unless great caution be taken, there is more harm than good to be apprehended from the use of them. Interest and prudence alike suggested the propriety of discontinuing the further application of them; and of endangering no longer a collection of more than two thousand plants, which we keep on sale, of all the best varieties in cultivation. There is this advantage arising from Auriculas being grown in moderately manured soil, that they are more easily kept in a healthy state, are less affected by the weather, and less liable to disease; they are, also, less sensible of change of place, when sold and transplanted into other soils. Only conceive, for a moment, what the effect would be, of turning a fat stall-fed ox into a barren pasture; or of restricting a London Alderman to the plain and frugal diet of a poor citizen.

Experience has taught those florists, who are in the habit of keeping strong plants of Auriculas to exhibit for prizes, and of forcing them forward, as they are coming into bloom, in extremely rich and highly stimulating compost, to cause them to throw up bold strong trusses, that they never can depend on the same flowers for the succeeding year; for vegetation, over excited, must decline afterwards; and those plants, if any opportunity offer, they generally dispose of, with the recommendation attached to them, of their having won a prize; and select others, to prepare and train in like manner for the next year's contest.

I have frequently received some of those prize taking

flowers from the country, but they have very seldom thriven well; they could not bear their roots to be shaken from the mould, and to be transplanted into a different soil; I would always decline purchasing such in future, if I knew it; vegetable economy, as well as animal, are both subject to certain laws of Nature, that cannot be transgressed with impunity; and our treatment of plants ought always to be conformable thereto. A plain and simple mode of culture, as regards all plants, provided they are found to thrive and flower well in using it, is always to be preferred, and ought to be pursued, as being the easiest, cheapest, and the best; to copy after Nature, is one of the best and unerring rules that a gardener or florist can go by, when he is once made acquainted with the habits of any plant, and the soil and situation in which it thrives best.

Strong stimulative manures, however beneficially they may act for the time, in producing large flowers, and vivid colours, too frequently leave the plants afterwards in a state of exhaustion, if not of premature and gradual decay; by forcing them so much, the juices are vitiated, and the constitution impaired; for we all know the injurious, if not fatal effects, that opium, laudanum, brandy, and even wine, taken in excess, produce upon the human body.

Mr. Bailey, of the Clapton Nursery, some years ago, produced, at the Islington Flower Show, as fine a plant of Lee's Colonel Taylor, and in as fine flower as ever was exhibited perhaps in England; and which he sold, the same day, to Mr. Brooks, of Ball's Pond Nursery, for the sum of five guineas; but this plant, having been forced in the manner described above, began to decline

after it had been fresh potted in other compost, and never lived to flower again.

We have, of late years, used the following mixture;—one barrow of rich yellow loam, or fresh dug earth, from some meadow, or pasture land, or common, with the turf, well rotten; one barrow of leaf mould; one ditto of well decomposed horse or frame dung; one ditto of cow-dung, two years old at least; and one peck of river sand, not sea sand.

This simple mixture, which is easily prepared, and within every one's reach, I can recommend, as a suitable and sufficiently fertile compost, always to be depended on for keeping the plants healthy, and in a thriving state.

For strong plants, intended for exhibition, I would add to the same compost, as a stimulant, a barrowful of well decayed night soil, with the application of liquid manure, once or twice, before you top dress in February; and twice more in March, not oftener. A peck of sheep-dung, with the same quantity of horse-droppings, put into a large tub of water, stirred up frequently, and left to ferment a week or two before it is used, may be applied with good effect and perfect safety.

A portion of light sandy peat earth, generally to be met with on the tops of barren heaths, or moors, though not easily obtained everywhere, may be added, as a safe and useful ingredient; particularly for plants kept in low and damp situations, where light potting, and light compost, are found to answer best.

By way of change, we make use of the following composition;—two barrows of Wanstead loam, with the turfy part decayed; one ditto of leaf mould; one ditto of

cow-dung; one ditto of old frame or horse-dung; a half ditto of old night soil; a half ditto of sheep-dung; and two pecks of Thames sand; with a top-dressing of one quarter loam and three quarters sheep and cow-dung, rotted, and mixed together in one heap; and manure-water as before, with the intent, as florists express it, to throw in colour, and to encourage the growth of the umbel or truss, then shooting up to flower.

WINTER.

In the three Winter months, from the 21st of November, to the 21st of February, Auriculas do not require much of our care, beyond watering them occasionally; plucking off the dead leaves, and covering them with mats, or a little coarse hay litter during severe frost; and this covering ought more particularly to be given them in February, because their trusses then begin to appear, which, if frozen hard, will shew the ill effects of it in the bloom. They want very little water in the Winter; and seem to get through it best, when kept rather dry, than otherwise, in December, and January; early in February, if the weather should then happen to be mild and open, you may give them a day's gentle rain, or, at least, rain sufficient to reach their roots, at the bottom of the pots; and this may be repeated, when necessary, through the month; you may now give them the manured water twice, and do the same again in March, allowing a week between each watering. About the middle of the month, or as soon after as the weather permits, top-dress with some of your best and richest compost; taking care, in the first place, to

remove as much of the earth as you can from the top of the pots, without injury to the roots; the liquid manure, and the top-dressing will add fresh life and vigour to the plants, and accelerate their growth; they now require all the air you can give them.

If any plants require shifting into larger pots, this is the proper time for doing it.

MARCH.

To insure a good bloom, much depends upon the care you take of them in March; let them receive no check whatever, either from want of covering or want of water; let the lights be off all day, if the weather is in any degree favourable; and let the plants receive all the soft and gentle rains that fall, until the pips open; protect them, however, from cold sleet and snow, and cold cutting winds. By the middle of March, the flower stalks will have shot up, and the flower buds will begin to grow; and as they are the tenderest part, and most liable to injury from frost, which often prevails by night, more or less, at this season of the year, it is advisable, nay more, it is highly necessary, to give them additional covering, to prevent their being chilled and nipped by it; neither expose them too hastily to the sun, if it should shine, before the frost shall have disappeared; and let the same precaution be used in April.

To prevent the stalks being drawn up and weakened, so that they cannot support the trusses, let them have all the air possible. Thus, having nothing to retard or check their growth, they cannot fail to go on well, and produce large trusses of rich bloom.

APRIL.

By the end of the first or second week in April, the flowers will begin to expand, and shew their colours; when the lights must be kept on, by day and night, to prevent them from getting washed by the rain, or tarnished by the sun; either of which would deaden their brilliancy, and spoil their beauty; air must be given by raising the lights at the back of the frames; and thin mats thrown over them, to keep out the hot sun, during the middle part of the day; let the frames be shut close in the evening, and warm covering continued awhile longer in case of frost. Now is the time to thin out the crowded pips from the centre of the trusses, which will give more room to the rest to grow, and to expand themselves, and lie flat, and come more nearly of a size. When the plants are fully blown, let the best and strongest of them be taken out of the frames, and be set on boards, sand, or coal ashes, behind a low fence, or private hedge, and covered with large hand-glasses; here they will remain cool, and shaded, and preserve their blossoms fresh for three weeks; cover them with a mat at night.

As soon as the flowers begin to fade, remove them to a north or north-east aspect, where they will have to remain till November; when you should be provided with the conveniency of placing them on a raised platform, and of sheltering them from the sun and rain with boards or shutters, hung on hinges, to let up and down, as occasion requires; our plants are never set on the damp open ground, Summer or Autumn. Do not forget,

in June, to pluck off the dying petals, which, if left on, are injurious to their forming the seed; you may likewise nip off the whole of the pips on young plants, just above the pedicels, to strengthen and increase their growth; many persons, who are careless about the seed, serve them all in this way.

POTTING.

As to the fittest time for shifting the plants into fresh compost, it matters very little in my opinion, whether it be done the beginning of June, or two months later; from experience, I have found either time suitable; provided you can meet with a few days of clouded sky, and moist atmosphere; the plants, after flowering, relapse into inactivity, and grow very little during the hot Summer months; if you pot early, you ought, also, to top-dress the plants with fresh compost in September; because the mould in the pots, by that time, must be greatly impoverished by watering.

Remove all large offsets from the plants sometime in March, because they grow quickest in the Spring.

ADDITIONAL REMARKS.

The principal points to be attended to, are the putting plenty of broken tiles at the bottom of the pots, to secure a good drainage; the picking off all the dead leaves from time to time; the shortening of the tap root of old or strong plants; the placing them in a cool shady spot in the Summer; and the guarding them from too much wet in the Autumn; in fact, they ought never to receive more

than six hours rain, at any one time, throughout the year, unless in high situations, where the mould soon dries again. Great care ought, also, to be taken, not to rend the main root of the mother plant in removing the offsets, which often produces canker and rottenness ; less injury will arise from a clean cut, with a sharp knife, than from a forcible separation by the fingers. If the plants, in the Summer, are attacked by the green fly, which sometimes is the case, they ought to be put into a frame, and smoked with tobacco ; for if they are suffered to continue in a lousy state, it is impossible for them to thrive ; and they will, of course, become sickly. Be careful, also, in giving water, not to lodge it in the hollow crown of the plants ; and if any of them should flower a second time in the Autumn, which, in mild open seasons, they will sometimes do, never remove the flower by breaking off the stem close to the plant, lest it should rot down into the heart of it, and cause it to rot likewise ; pinch off the pipe only, and then the top most probably will wither, and dry up without further injury ; many a Colonel Taylor has been lost in this manner, when forced into flower by too much wet in the Autumn. Auriculas do not always present the same uniform appearance of bloom, be the compost what it may ; it shall be much finer some years than others ; sometimes it will come short of its edging or marginal colour, whether green, grey, or white ; and this is the case, when the ground colour prevails, and extends itself too far on the margin, so that the symmetry of the colouring is lost ; at other times, the ground colour appears faint and imperfect ; it is then said to be out of colour, or to be short of it. Persons, giving orders for Auricula plants, early in the Spring, will do well to re-

ceive them in pots; transplanting, at this time, always injures their blooming.

Let it be understood, that all this extreme care, according to the very letter of the directions given in this Supplement, is not deemed necessary, nor is it required in the general good culture of Auriculas; except from those who belong to some flower society; and whose aim and ambition is to excel, and to be entitled to the prizes awarded for the best grown and most perfect flowers.

SOWING SEED.

I would recommend to those who are in the habit of raising Auriculas from seed, to make two sowings; the one early in January, in the manner already described in my Treatise; with this caution, not to overcharge the saucers with water, in which the pots were recommended to be placed; for I have sometimes found, that the mould, if over watered on the top, while the bottoms of the pots were standing too deep in the water, has imbibed too much moisture; and that the seed has often not only rotted, but that the young plants, that were up, have damped off also. The seed never vegetates freely in very wet mould; yet it should be kept moderately moist. The other sowing may be made towards the middle of February, or the beginning of March; which, being less liable to be checked by frost and cold, will often produce a better crop, and be attended with less trouble than the former; though it would be too much to expect, that any of the plants, raised at this later period, will flower the following Spring; the seed may be sown in pots, with glasses to fit inside of the rim, or in open pans, which may be

placed in a frame filled with tan ; for a very little moderate heat, to keep up the temperature by night, for two or three weeks, will make it vegetate sooner ; if the weather should prove mild and temperate, with occasional sunshine, you may expect to see the seed break ground early in April. Private Auricula growers have seldom the convenience, either of a greenhouse, or forcing-house ; or else the quickest way to get the seed up, is to place the seed-pots in the hot-house, or in a cucumber frame, which is then at work, about the beginning or middle of February, till the seeds vegetate, and break ground ; as soon as this takes place, (which is generally in ten days, if the seed is good and fresh,) remove them instantly into the green-house, and cover them closely with the striking glasses for a week or two, that they may suffer as little as possible in the transition from heat to cold ; whereas, in raising plants, in the usual way, without heat, the seed will often remain six weeks in the pots, before it makes its appearance.

For the purpose of watering, both before the seed comes up, and after, get a small pot, with a finely pierced rose, that the water may descend lightly, and neither disturb the mould nor the seed ; as soon as the young plants make their appearance, give plenty of air, to make them grow strong and hardy ; in fact, it might be as well to remove the inner glasses by day, and to cover them only at night ; for by keeping the glasses on too long, the plants are often spoiled ; they become weak and tender, and more liable to perish ; if the weather becomes hot, remove them to a shady situation ; and as soon as they are ready for handling, transplant them into other pots, an inch or so apart, and in two months time shift them

again ; after transplanting each time, set them in a close frame for a few days, but not longer ; it is best to inure them to the open air, in a shady situation, and to bring them up hardy. Young plants, like young children, thrive best on plain light food ; one half leaf mould ; one quarter cow dung ; one quarter sandy loam, makes a suitable compost for them.

AURICULAS WITH GREEN-EDGED PETALS.

Atkinson's Constant Beauty.	Hogg's Romeo.
Barker's Telemachus.	——— Eclipse.
Barlow's King.	——— Magnificent.
Booth's Freedom.	——— Prince George.
Bearless's Superb.	Hodges's Bolivar.
Buckley's Jolly Tar.	——— Victory.
Brown's Duke of York.	Hedge's Britannia.
——— Lord Hill.	Howard's Lord Nelson.
Cockup's Eclipse.	Hudson's Prince Leopold.
Cooper's Black Diamond.	Lee's Colonel Taylor.
Clegg's Black and Green.	——— Talavera.
——— Lancashire Lad.	Lawrie's Glory of Cheshunt.
Coldham's Blucher.	——— Field Marshal.
Chilcott's King.	——— Alexander.
Clough's Do-little.	——— Champion.
——— Bagslate Hero.	——— Daphne.
——— Defiance.	Miller's William Pitt.
——— Juno.	Mather's Brilliant.
Dean's Smoker.	Moore's Jubilee.
Egerton's Lord Combermere.	Metcalf's Lancashire Hero.
——— Duke of Wellington.	Pollitt's Ruler of England.
Eaton's Earl Grey.	——— Highland Boy.
Faulkner's Ne plus Ultra.	——— Standard.
Fletcher's Lady Clive.	Page's Champion.
Gorton's Champion.	——— Duchess of Oldenburgh.
Galloway's Glory of Oldham.	——— Waterloo.

Partington's Trafalgar.
 Pearson's Badajoz.
 Robinson's Queen.
 Salter's Garland.
 Smith's Waterloo.
 ——— Princess Charlotte.
 ——— Miss O'Neill.
 ——— Thetis.
 ——— Minerva.
 ——— Emperor Alexander.
 Snook's Beauty.
 ——— Regulator.

Stretch's Alexander.
 Tomlinson's Commander.
 Troup's Eclipse.
 Warris's Blucher.
 Waterhouse's Shakspeare.
 Wilde's Colonel Anson.
 ——— Diadem.
 ——— Highland Lass.
 Wood's Lord Lascelles.
 Wrigley's Northern Hero.
 Yates's Lord Collingwood.

GREY EDGED.

Ackerley's Alpine Shepherdess.
 Ashworth's Rule-all.
 Barlow's Morning Star.
 Brown's Lord Harrington.
 ——— Mercury.
 Butterworth's Duchess of Wellington.
 ——— Lord Hood.
 Chilcott's Brilliant.
 Cox's British Hero.
 Dean's Regulator.
 Dyson's Queen.
 Eaton's Lady Grey.
 Fletcher's Ne plus Ultra.
 ——— Maria.
 Gabell's Delight.
 Grimes's Privateer.
 Hogg's Lord Dudley.
 ——— Lord Tenterden.
 Hey's Lovely Ann.
 Howard's Sweepstakes.
 Kenyon's Ringleader.

Lawrie's Elegant.
 ——— Waterloo.
 ——— Ringleader.
 Moore's Violet.
 ——— Navarino.
 Oliver's Lovely Ann.
 Pearson's Liberty.
 Rider's Waterloo.
 ——— Sovereign.
 Scholes's Generalissimo.
 Simpson's Marquis of Granby.
 Summerscale's Balloon.
 Sykes's Complete Flower.
 Taylor's Plough Boy.
 Thompson's Bang-up.
 ——— Revenge.
 ——— Bright Phœbus.
 Tranter's Constellation.
 Troup's Lord Dacre.
 Warris's Union.
 Waterhouse's Walter Fawkes.

WHITE EDGED.

Crompton's Admiral Gardener.
 Hinchliff's Lily of the Valley.
 Hufton's Mrs. Willoughby.
 ——— Mrs. Sherbrooke.
 Hughes's Pillar of Beauty.
 Lawrie's Favourite.
 ——— Adonis.
 ——— Fair Rosamond.
 Leigh's Venus.
 ——— Earl Grosvenor.
 Lord of Hallamshire.
 Mansley's Lady Talbot.

Popplewell's Conqueror.
 Pott's Regulator.
 Scholes's Mrs. Clarke.
 Taylor's Favourite.
 ——— Glory.
 ——— Incomparable.
 ——— Princess Royal.
 Wilde's Black and Clear.
 ——— Albion.
 Wood's Delight.
 ——— Lady Gifford.

PLAIN, OR SELF-COLOURD.

Ancient Lady.
 Bainbridge's Tippoo.
 Blue Admiral.
 Bury's Lord Primate.
 Flora's Flag.
 Gorton's Stadtholder.
 Hogg's Duchess of Leinster.
 Hufton's Squire Mundy.

Lawrie's Metropolitan.
 Mellor's Lord Howe.
 Netherwood's Othello.
 Redman's Metropolitan.
 Sapphire.
 Scholes's Ned Ludd.
 Whittaker's True Blue.

SHADED ALPINES.

Arab.
 Beauty of England.
 ——— of the Alps.
 Bishop of London.
 Chatillon.
 Comet.
 Don Pedro.
 Favourite.

Flora.
 King of the Alps.
 Lady Sitwell.
 Queen Adelaide.
 Royal George.
 Ultramarine.
 Venus.
 Vesuvius, &c. &c. &c.

OF THE RANUNCULUS.

In low, warm, and sheltered situations, by the sides of brooks, or rivulets, where the ground is fertile, and of a loamy texture, retentive of moisture, resting on a sub-soil of strong loam, brick earth, or clay, the *Ranunculus* grows freely, and flourishes best; it is almost folly, and a waste of time and labour, to plant them in light sandy soil, on a gravelly bottom, and particularly on hilly, or high ground; for if the weather be hot and dry in May, they must inevitably fail. The only way of removing this objection, is, by preparing a bed suited to the place.

Dig and remove the earth and sub-soil, consist of what they may, to the depth of two feet; then fill in fresh substantial earth, or loam, well mixed, and manured with full one-third of rotten cow-dung, within four inches of the top; fill this space up with the same sort of earth, free from any manure, and make it level with the surface. This ought to be done before Winter, so that the bed may be quite ready for planting, except raking and smoothing, about the 21st of February, or as soon after as the weather will permit. The four inches of mould on which the roots are to be set, ought to be prepared, screened, turned, and sweetened, in the Summer; plant the roots four inches apart every way, or three inches and a half in the rows, which may be five inches asunder; and cover them with the same sifted mould, an inch and a half deep. This being mostly a wet month, it would be as well to keep this mould rather dry, by covering it with mats sometime previous.

Some florists put a stratum of cow-dung, trodden down, three inches thick, about nine inches below the surface, to intercept the rains; this serves to absorb and retain the moisture, and to nourish the roots. I have known others, again, to mix and incorporate the dung with the mould, and to plant immediately upon it, and the plants have flowered well, too.

RAISING SEEDLINGS.

The attention of *Ranunculus* growers seems directed, at present, to the raising of seedlings; and three or four of them have been already successful in producing a few very beautiful varieties, which have been sold at exorbitant prices, in my opinion, far beyond their value. Among some of these which have been purchased thus dearly by London florists, without having seen them in flower, many have turned out, at most, only three parts double; a shilling a root for such, would have been an ample price, as they could be regarded only as flowers calculated to produce seed, or to furnish perfect stamens, wherewith to impregnate others; such has been the case with some of the seedlings sent up from Scotland. *Ranunculuses*, that shew broad eyes when blown, however beautiful and varied in colour, cannot be called perfectly double, and are, therefore, not much esteemed. Some florists are often as much influenced by vain conceit, as they are by extreme cupidity, to overrate their flowers, and to form erroneous opinions of their worth; the silly purchaser, who leaves the choice to such persons, buys, he knows not what, and pays pretty dearly for his credulity. Every one is aware, how difficult it is to obtain

seed from double flowers, whose stamens and pistils are often imperfect, and which, by excessive culture, have been changed into florets and petals; where these sexual organs are defective and incomplete, it is impossible for such flowers to bear seed; and it is equally absurd and vain to attempt to fertilize any of those very double flowers, in which neither disk, carpellum, stamens, pistil, stigma, nor ovarium, are visible, with the pollen of any semi-double ones, be the anthers ever so well charged with it; you may as well rub it on a brick-bat, for any effect it will have. When I read of the Rev. Joseph Tyso's recommending persons to impregnate such flowers, as *Le vrai noir*, *Quixos*, *Julius*, &c., he recommends what would be almost a miracle to accomplish; however, lest I should misrepresent what he has asserted, I will quote from his own account of it, in *Loudon's Magazine*. Florists are, undoubtedly, very much indebted to him for the useful information he has communicated on this subject; and they cannot do better than follow the directions which he has given, and which he seems, himself, to have practised, with considerable success. The chief merit of his system, is, in keeping a few semi-double flowers to furnish perfect stamens, with which he fertilizes others that are more double, and, by which means, he is enabled to raise a greater quantity of seed. His letters, in other respects, contain nothing new; for his method of sowing seed, the time, &c. have been known and practised for years.

ON THE CULTURE OF SEEDLING RANUNCULUSES,

By the Rev. JOSEPH TYSO.

"I have been making experiments on the culture of seedling Ranunculuses, for five or six years, and I have, at length, succeeded to admiration. Some years ago, I sowed some Ranunculus seed, but not one vegetated. Next year, I examined the seed I sowed, by the aid of a small lens, and found it only chaff. Some time afterwards, I obtained a thousand seedlings, which had never bloomed, but they did not produce any good flowers; *they were evidently grown to be sold.* However, I sowed some seed from the best semi-double; this produced only a few promising blooms. I thought, if I could sow seed from my old double flowers, my seedlings would, many of them, be double. I then began to impregnate the double flowers with the farina of the single ones. This could not be done with effect in every case; but, wherever I found an old flower with a pericarpium, or eye, I gathered a single, or semi-double flower, and applied the farina to the eye of the double flower. Soon after this operation, I perceived the pericarpium, or seed vessel, increase in size, until many of them became an inch long, particularly those of Variat, Arbrisseau, Grand Monarque, Horatio, Rose Incomparable, La Tendresse, and a few others. I kept the seeds separate—at least, I preserved them in classes, dark, yellow-edged, &c., and others, the most strongly marked, and sowed them in separate boxes, and, the next year, I planted the roots in separate rows; the result *has been*, that they bear a striking resemblance to the

mother plant, as to colour, and habit of growth. The seeds sowed from Naxara, Variat, and Voila le vrai noir, produced dark flowers; those sowed from Arbrisseau, Grand Monarque, and Horatio, produced yellow, spotted, and edged, and several superior to the original plants. Double flowers cannot produce seed, because they contain no anthers, but merely the germ, which must come in contact with the farina from the single flowers, before it can be impregnated; for which reason, no good seed can be saved from double flowers, without a bed of seedlings.

I have sowed, at all seasons, from the 1st of August, to the 1st of March. I prefer the middle, or latter end of October, and the beginning of January, to other times. I sowed in boxes, eighteen inches, by eleven inches, and four inches deep; I fill them full of loamy earth, and press the surface level; then I sow the seeds about an inch apart, cover them as thinly as possible, and water with a fine rose; then I place the boxes under glass, without heat. The plants usually make their appearance in about a month. I give air day and night, except in a severe frost; then I cover up with straw mats; with such protection, the young plants will endure the severest seasons. Mine were not injured by the severity of last Winter. I clean the surface of the boxes from green moss in February, and top dress them. I put the boxes in the open ground, up to the edge, the second week in May, and water daily until the grass begins to wither. I then suffer the boxes to become quite dry; and, in the middle of July, I take them up, and preserve the roots in bags, until February, when I plant them, as I do my general stock. In the following June they flower in great *profusion.*"

In a second letter, Mr. Tyso rather confidently proceeds to state;—"But I am aiming at perfection, and flatter myself, in this particular, that I am not far from the mark; and, with your permission, I will now communicate what I consider the "ne plus ultra" of the system. It consists in having some of the best show flowers of each class, which produce a pericarpium, or seed vessel, namely, dark, white, scarlet, crimson, yellow-striped, yellow-edged, white-edged, spotted, mottled, olive, &c.; and a number of the best semi-doubles of each corresponding class, producing anthers, as well as pericarps. Then, if a new dark flower is desired, fertilize Naxara, Variat, Quixos, or any good dark flower, with the pollen of a dark semi-double, or nearly double flower, containing the best properties as to colour, shape of petals, and general habit. If a superior flower, with a yellow ground, and dark edging, be desired, then fertilize Grand Monarque, Julius, or Grand Berger, with the pollen of a yellow edged flower of first rate properties. Those that have the greatest number of petals are to be preferred, so that they have anthers producing farina. A similar method must be pursued, in order to obtain a superior flower of any other class; the seed, generated in this way, will certainly produce some fine varieties. Let the parent flowers possess the requisite properties, and there can be no doubt but a part of their offspring will do the same, and some of them in a higher degree of perfection than their renowned progenitors. This, I consider, the perfection of the system."

The idea, I admit, is very fair and feasible in theory, that seed, raised from a dark flower, should produce dark ones, and the same with respect to all other colours; *but I am satisfied, from experience, that it is fallacious,*

and founded in error. The seed of a *Ranunculus*, whose varieties consist of every shade and colour that you can mention, will be found nearly as variable and inconstant as the *Dahlia*; and more so than either the *Tulip*, or *Carnation*, whose colours are both fewer and limited; it is, therefore, reasonable to infer, that the same head of seed will produce flowers of different colours and shades, and will not be confined to that one same colour of the mother plant, from which it was raised, even if it was impregnated with farina of a similar coloured flower. It is not worth the while to argue this point further; for it matters very little of what particular colours the seedlings are, provided they are clear, distinct, and bright, the petals well formed, and regularly disposed, and the crowns well filled up and rounded, according to the best modelled flowers among the old sorts. I have grown *Ranunculuses* for some years with various success, but I have never found the flowering to be regular and constant; if the bed one year presented a considerable mass of rich bloom, the next, most likely, proved thin and defective, as if the roots were exhausted, and unable, two years running, to support a luxuriant growth. Much, certainly, depends upon the natural soil and situation of the place being suitable for them; upon the roots being taken up in good time, (say July,) and not suffered to remain in the ground to vegetate afresh; and, upon their being gradually and well dried in an airy room, not exposed to the hot sun, lest the sap and moisture should be extracted too hastily, and the roots diminish in substance; yet this uncertainty, after two or three years unsuccessful trials, has induced many an admirer of the flower to abandon the cultivation

of it. I know of no flower that is more benefitted by change of place, than this; and florists would do well to exchange roots occasionally, to keep them in health and vigour; if they once begin to decline, and decrease in size, it is hardly possible to stop it, without such change; for, if they are still continued and confined to the same spot, they will only decline the more, till they dwindle away to nothing at last, and perish. They require a good supply of water between the rows, both as they come into flower, and during the whole time they continue in it; the bed should be hooped over, and covered with canvas, or mats, to defend them from the rain and sun. To say more, would be only to repeat what I have written before in the Treatise, to which I beg to refer.

Ranunculuses are become so abundant throughout the country, that the best named flowers may be obtained, any where, for a shilling a root; and the best mixt double flowers, for ten shillings a hundred, with the exception of a few tender rooted sorts, which are with difficulty preserved and propagated. The fuss that some make about that dark flower, Abbé St. André, and of which they seldom have more than one or two roots, at most, and for which they affect to ask forty or fifty shillings a root, is really quite sickening; Quixos, Van Gom, Le vrai noir, &c. are quite as pleasing.

Catalogues of this flower are so common, with little or no variation, that I have not thought it necessary to print one; for the same reason I have, also, declined inserting the names of Pinks.

The undernamed are among the best of Waterton's Scotch seedlings, which I have yet had an opportunity of seeing.

Buck's George IVth.	Fletcher's Defiance.
Billing's Queen.	Billington's Beauty of Over.
Howarth's William IVth.	Stead's Telegraph.
Pearson's Alexander.	

And some others, mentioned in my Treatise, still seem to take the lead as shew-flowers. Tanterarara, Black Prince, Cox's Regent, and Fletcher's Defiance, which are good growers, in general, and make strong plants, are the best calculated for the open borders, as good flowers to save seed from.

Huften's New Seedling Polyanthus, Lord Brougham, Earl Grey, and Lord John Russell, are, in my opinion, three of the best and most perfect flowers, in every respect, that I have yet seen; they were all raised at the same time, from the seed of Pearson's Alexander, and bear a strong resemblance to each other.

DAHLIA.

I know of no flower that has been so much improved, in so short a time, by culture, as the Dahlia; the reason is, every gardener seems to have taken it under his special care, and to have bestowed the utmost attention upon it; and the success which has attended his labours, has induced him to continue them. The Dahlia, it must be allowed, by every one, is a very showy, rich looking flower, and of the brightest and most varied colours; some few may be styled even magnificent; yet its foliage

corrode them, and choke and dry up their pores; so that the plants can neither properly absorb nor secrete the nourishment they receive through the roots; for the action of the sap is obstructed every way; the leaves cannot perform their natural functions, and waste away, and the plant goes off. There seems no remedy; for I have found, that, by washing off the dust, and watering the leaves in the heat of Summer, they have rotted the sooner.

No plant delights in purer air, or requires it more than the *Polyanthus*; for, when planted in a genial soil, and cool shady situation, having the morning sun to warm and enliven it, it thrives luxuriantly; and yet the ground should neither be damp, nor wet below, or else the roots become cankered, and unsound. We observe how freely and spontaneously the wild Primrose grows on a bank, peeping from beneath the shade of the Hawthorn. *Polyanthuses* are no where more cultivated, nor with greater success, than in Derbyshire, Lancashire, Nottinghamshire, and Yorkshire; there is hardly a garden in those counties that does not contain some fine varieties, more or less. It is, also, a favourite flower in many parts of Hampshire; and some very excellent seedlings have been raised at Winchester; being among the earliest productions of Spring, its appearance is greeted with a welcome everywhere.

As to its culture, it is found to succeed best in strong loamy soil, mixt with sand, broken free-stone, or coarse round gravel; it dislikes much dung of any sort; a peck of leaf-mould, and the same quantity of old cow-dung, are sufficient to mix with two barrows of loam.

Its two most prevailing colours, are a very dark reddish

brown, and a bright red, of a crimson hue, edged with yellow of an orange or pale lemon colour. Some of the Pelyanthuses so nearly resemble each other, that if the tallies be removed, it is difficult for a common observer to distinguish them again; and this close resemblance, I fear, often induces knavish dealers to substitute one for another, notwithstanding the usual caution sent with any order; "Mind and be correct in the sorts;" I have frequently been imposed upon. Many of the florists are so anxious to increase the number of the plants for sale, and, I might add, so avaricious withal, that they injure them greatly, by dividing the roots too much; so, that if they live, it is impossible for them to make good plants against the Spring, and to be able to bear good trusses of flowers. It is really shameful to see the little weak things that are often sent up, and charged as strong plants. I have often sent for plants to complete an order, and have frequently received some of this description, of which I could make no use; for I was really ashamed to deliver them. All plants that are much excluded from the open air, sun, and rain, and confined in frames, or under hand-glasses, for the sake of preserving the blossoms uninjured, in a manner inconsistent with their natural habits, seldom produce much seed; therefore, if you are desirous of saving seed from good flowers, you must let them be exposed to all weathers, and take their chance. Slugs and snails, which are very fond of them, ought to be prevented from approaching them, by sprinkling a little quick lime, occasionally, round the plants, in warm evenings, when they creep out; and commit their depredations. Sparrows, and Chaffinches, should also, be prevented from wantonly picking off the opening buds by covering them with a net.

The common mode of propagating the *Polyanthus*, is, by dividing the roots in Spring, or in September; this should be done with the hand, for they are not very fond of the knife. As soon as they have done flowering, in April, they ought to be earthed up close round the neck of the plants, to encourage fresh fibres, and the pots, either plunged in the ground, or else the plants themselves ought to be turned out of the pots, and planted in the ground, which, perhaps, is the best method; where they are to remain till the Autumn, when the roots may be divided, and the plants repotted; I mean those only which are wanted for show-flowers; those of inferior quality, are best in the ground. Some large growers have assured me, that they often succeed best by leaving the plants in the ground, till the beginning of March, when they take them up, with balls of earth, and pot them; that, by so treating them, the trusses have been stronger, and finer, than those which were wintered in frames; and that they generally came in the first for prizes at their flower-shows. An improvement upon this plan, would be, to hoop them over, and cover them with mats during very severe weather, or else to put a frame and lights over them. *Polyanthuses*, that are kept in frames through the Winter, and in Spring, till they come into flower, are not exempt from the attacks of the green fly; and when this is the case, they ought to be slightly smoked with tobacco, and got rid of; or else the plants soon become sickly,

Hufton's Lord Brougham.	Nicholson's Bang-Europe.
———— Earl Grey.	Cox's Regent.
———— Lord John Russell.	Turner's Emperor.
Burnard's Formosa.	Crownshaw's Invincible.

Buck's George IVth.	Fletcher's Defiance.
Billing's Queen.	Billington's Beauty of Over.
Howarth's William IVth.	Stead's Telegraph.
Pearson's Alexander.	

And some others, mentioned in my Treatise, still seem to take the lead as shew-flowers. Tanterarara, Black Prince, Cox's Regent, and Fletcher's Defiance, which are good growers, in general, and make strong plants, are the best calculated for the open borders, as good flowers to save seed from.

Hutton's New Seedling Polyanthus, Lord Brougham, Earl Grey, and Lord John Russell, are, in my opinion, three of the best and most perfect flowers, in every respect, that I have yet seen; they were all raised at the same time, from the seed of Pearson's Alexander, and bear a strong resemblance to each other.

DAHLIA.

I know of no flower that has been so much improved, in so short a time, by culture, as the Dahlia; the reason is, every gardener seems to have taken it under his special care, and to have bestowed the utmost attention upon it; and the success which has attended his labours, has induced him to continue them. The Dahlia, it must be allowed, by every one, is a very showy, rich looking flower, and of the brightest and most varied colours; some few may be styled even magnificent; yet its foliage

and branches are of an inferior and vulgar character, devoid of grace and beauty.

We hear of superb collections, in different parts of the country, rated as high as two and three hundred varieties, or more, half of which, I am pretty certain, might very well be spared ; the sacrifice would be no loss to florists, though it might to the owners ; yet, I have no doubt, but that one hundred might be selected, in England, from them all, which would please the most difficult Amateur ; and that this number, in a few years more, will, in all probability, be more than doubled ; for every year's sowing produces flowers superior to those of the year preceding ; 20,000 seedlings, at least, are raised yearly, (the number, I believe, is underrated,) so that we may confidently anticipate the increase I here speak of. The most striking colours consisted, for some time, of red, crimson, and very dark velvety purple ; but, at present, we have fine flowers of all colours. The only defect remaining, if it can be considered such, is, that many of them are still hardly double enough, and shew too broad an eye, or disk, when full blown ; as such flowers are not admissible as shew-flowers.

In regard to plain colours, it will, perhaps, be impossible to obtain finer, purer, or brighter, than those we have already, and which accord with the names as correctly as any painter himself could desire. The intermediate shades between the two extremes of any one colour, are truly wonderful ; as are fully exemplified, in numerous instances, in the two simple colours of red and yellow. The different tints, or hues of purple, are, likewise, very remarkable, from the dark, or black purple, to the pale lilac, which, in some flowers, is so finely

attenuated, and so lightly diffused, as to be barely perceptible, as in those which are named lilac and white, pale grey, French white, blush lilac, rosy lilac, &c. ; the gradations of colour in red, including scarlet, crimson, rose, &c. are without number.

The marked preference which is manifested by some persons for particular colours, depends on their individual taste and liking ; while others, who seek for diversity and general effect, covet all, not wishing to exclude any, whether agreeable to them or not, that they may be the better able to produce it. As far as my own taste and fancy are concerned, I cannot help declaring, that I have viewed with most pleasure some of the newly raised rose coloured Dahlias, whose shades are so soft and beautiful, yet rich, bright, and varied ; and whose petals are finely disposed, smooth on the edges, filled up in the centre, as all double flowers ought to be, and rather rounded, than pointed, at the ends ; but the most surprising thing of all, is, that this great display and endless variety of colour in the Dahlia, has been produced within the memory of most of us, by what I may again term excessive culture, from one flower, a dull light purple, of a leaden cast, approaching to what is understood by London smoke ; and this colour was confined to a flower which, when introduced into this country in its natural state, was not a bit more double than the annual Sunflower, the single Marigold, or the field Daisy.

It may now very reasonably be presumed, that Dahlias will, very shortly, undergo a still greater change, and that some of the plants, raised from seed, will come regularly striped and variegated with white grounds ; for the plain, or self-colours, by the perseverance of florists

in sowing seed every year, and that so abundantly, have been so broken and changed, that we have already many very splendid varieties of flowers, under the several designations, of shaded, radiated, two-coloured, in various ways, as blended, striped, mottled, edged, tipt, splashed, and spotted. Those which have the margins of the petals lightly marked, or tipt with different colours, are yet few in number; they present to the eye a curious and fascinating appearance; yet, there are other light coloured varieties of pure white, irregularly variegated with lilac and purple; that is, having the centre part of the flower lightly spotted, and the outside petals more strongly coloured, which are equally pleasing and handsome. There is nothing very striking in the one named the Hanover Stripe; and as for the single striped purple and white, it is hardly worth notice, except for the promise it affords, and the hope it holds out to florists, of being shortly able to raise double flowers, of various colours on a white ground, whose stripes will be regular and uniform.

As to the globe-shaped Dahlias already raised, the dark crimson, in particular, and the large red, are the only two deserving of notice; as for the rest, including the bonnet-shaped, which do not possess one good property in any respect, they are not worth cultivating. The same may be said of many of the Anemone flowering, which are far more curious, than handsome; for there are very few varieties yet raised, deserving of particular admiration, either for size, shape, or colour. It is true, they may be improved, but, at present, how utterly insignificant they appear, when compared with those rich, magnificent, and well-formed flowers, of the other sort.

scarlet, crimson, orange, yellow, &c. have been lately raised, in various parts; those which I have seen, had their petals too broad and notched near the centre, or eye, and were greatly inferior in shape to the old dark crimson.

Some flowers have their peduncles so short, that they are hid among the leaves, and nearly lost to view; this, of course, is a defect; whereas, those which have the flower-stalks long, and whose blossoms rise above the foliage, are seen to best advantage, and make the best display.

There is great room, as well as ample materials, for the exercise of taste, and the display of ingenuity, in grouping and arranging a clump of those flowers, so as to produce a pleasing, as well as a grand effect on the beholder. The various coloured blossoms should be so blended, and the height so arranged, that the whole should be seen, and made to harmonize—the parts to the whole, and the whole with its parts; presenting large, uniform, and dazzling masses of bloom, such as no other flower is at all capable of affording. It is but common justice to state, that Mr. Joseph Wells, private Gardener at Red-leaf, Tunbridge, was among the first who succeeded in raising dwarf Dahlias from seed; and this, it is understood, was effected by crossing and fertilizing the different varieties in his possession, though no such result was then expected.

The information would be extremely desirable, if any person, who has been in the habit of raising Seedling Dahlias, and who has paid close attention to the subject, could point out, and trace the order and succession in which this change of colour has taken place; and could,

describe correctly the colours of the several flowers from which the seed was obtained, that first produced white, scarlet, and yellow. There is a great affinity between purple and crimson, though, apparently, so dissimilar; and the bases, or elements of the colouring matter, must be nearly alike. We know that blood, taken from the veins, and exposed to the air, assumes a purple hue; and that the flakes on a crimson striped Carnation will often change to purple; but we are totally ignorant of the process of Nature in effecting this change, as well as of the particular agent made use of; all that could be advanced on the subject would be mere conjecture, unsupported by proof. If, then, the seed first sown in England, was from a purple flower, the fair inference would be, that it would produce purple and crimson, as these were the two first prevailing colours for some years; from crimson, would proceed red, rose, and scarlet; and from scarlet, yellow. The artist, in mixing colours of red, carmine, or lake, adds a portion of yellow to make it scarlet; therefore, the bases of these two seem allied. It has been remarked, that the yellow colour is always produced last, and that the stripes and variegation follow in time; the two instances of yellow Hyacinths, and of yellow Picotees, may be adduced in confirmation of it. It seems, also, strange, that flowers, purely white, without the least stain, should be raised from coloured flowers; but this is a subject I had better close, as being beyond my comprehension.

PROPAGATION BY CUTTINGS.

Nothing is more simple and easy than the propagation of *Dahlias* by cuttings. Nurserymen, and the Gardeners

of Gentlemen who keep forcing and hot-houses, have only to place the roots in them, about the first of March, (many begin in February,) when they readily break, and throw out young shoots, for cuttings, which ought to be taken off when three inches long, and planted in 48 pots, three or four in a pot, or one in a 60, and which may remain in the same place till they take root.

Those who have not this convenience, including most of the private growers, must provide some stable dung, and litter, about the beginning, or middle of February, and prepare a hot-bed, on which a cucumber frame and lights may be placed, to receive the tubers; the bed must be covered with six inches of mould, to temper the heat, and keep the steam under. If the tubers have been kept in dry mould, in pots, through the Winter, either in a greenhouse, or cellar, the best mode of keeping them plump and unshrivelled, they may remain so, if the crowns of the tubers are not buried, and the pots may be plunged in the mould. If the roots are out of pots, let them be covered with mould, except the crown; the heat will have declined in about three weeks, without fresh lining, when the cuttings will be ready; so that it will be necessary to have another gentle hot-bed to receive them when potted, or else fresh lining must be added to the first one. Let the mould you make use of be sifted fine, and mixt with a little leaf-mould, old rotten frame dung, and fine sand; when the cuttings are planted, water them sparingly for the first week or two, till the wounds be healed over; shade them from the sun, and cover at night with mats, in case of frost; if any hot steam should by chance rise, raise the lights a little, with a flat bit of tile, or oyster shell, to let it escape, to prevent their fogging.

After the cuttings are rooted, harden them to the air gradually, and pot them singly, in 60 pots; as they increase in strength, pot them again in 48 pots, in which they may remain, till turned into the ground, any time in May, or June; or they may be moved again into larger pots, to flower, as such will form small compact tubers, well adapted for package and carriage. These young plants are preferred to the old roots; and when trained up with single stems, form a fine head, and flower, upon the whole, better. If the ground they are planted in is of rather a free open texture, and dries quickly after rain, it is necessary to put three or four inches of manure, of any kind, on the surface, in form of a circle round the plants, to nourish the roots, to confine the moisture, and prevent evaporation; the stems and branches being of a brittle and succulent nature, should be well secured with stakes, to prevent their being broken by the wind.

Dahlias may be propagated, also, by dividing the roots, taking care to leave an eye to each tuber; some sorts are slower in breaking, or throwing out shoots, than others; this is the case with the Queen of the Yellows, Paper White, &c.

SOWING SEED.

Seed is to be obtained from many of the finest double flowers, if pains only be taken to impregnate them, and sometimes without it; or rather, let it be supposed, that bees, or other insects, have done this kind office for us, without our knowledge. Early blossoms, which have withered, and have been dried in the sun, disclose their seed, without much search; the calices also, later in the

season, and still in a green state, if burst asunder, or divided, and then left to dry gradually in a window, will often yield seed, when you had no reason to expect it without this closer examination. The seed ought to be sown about the middle of February, on a little heat, to get the plants up early; and which, if properly attended to, will flower the same year; the young plants ought to be pricked out, as soon as they are fit; three or four in a No. 48 pot; and as they advance in growth, they may be shifted a month after into small 60 pots, one in each pot; which, after it has grown in strength and size, may be shifted again into a 48, there to remain, till turned into the ground about the middle of May; in their young and tender state, take care to protect them from cold and frost, so that they receive no check, either to retard or spoil their growth.

N.B. A very fine flower, termed “All Perfection,” was raised two years ago; but two others were raised last year, termed “All Perfection,” likewise; and one of them very similar to the first, and as fully entitled to the proud distinction; therefore, let no florist *cunningly* deceive himself, by keeping any flower too long in his own hands, in hopes of a “golden harvest;” as he will assuredly be beat, and disappointed in his selfish views.

The following Catalogue contains as choice an enumeration of Dahlias, as any grown, *up to the present time*; and which may be obtained from, or through the author, *at the current prices*, which fluctuate every year, having, himself, commenced Dahlia grower. Fifty varieties, at least, have been excluded from this list, which he knows to be superseded, though they may linger in some collections a while longer.

White.

	Height in Feet.
Blanc Chevalier	5
Fimbriata alba	4 to 5
Hyppolite	5 - 6
Inwood's White	4 - 5
La Vestale	4 - 5
Mountain of Snow ..	5 - 6
Madame Poller	5
—— Puteau	5
Paper White.....	4 - 5
Reine Blanche	4 - 5
Roi des Blancs	4 - 5
Virginia	4 - 5

*Blush White, French Grey,
Shaded, &c.*

Albina	4
Arthemise	4 - 5
Blanche fleur	4 - 5
Brown's Titania	4
Madame Poller	4 - 5
Mademoiselle Lemon	5
Ophelia	4 - 5
Pencilled	3
Transcendant	5 - 6

*White, Striped, & Spotted with
Lilac and Purple.*

Alba purpurea	3 - 4
Agrippina	3
Calypso	4
China Aster flowered	3 - 4
Guttata Major	4
Le National	4 - 5
Nymphæflora	4
Tincta	3 - 4
——, No. 27, 63, 68	3 - 4

Blush, &c.

	Height in Feet.
Blanda perfecta	3
Fair Rosamond	4 - 5
Imogen	4 - 5
Juliet	4
Rosea alba	3 - 4

Lilac.

Bates's Rosamond....	4
Drusilla	4
Daphne	3
Dwarf Lilac	3
Ne plus ultra	4

*Rose coloured, of various
Shades.*

Amanda	4 - 5
Densa	2 - 3
King of Roses	5 - 6
Lady Grenville	4 - 5
—— Grey	3
—— Scott	3 - 4
Lasting Rose	4 - 5
Landgravine	3 - 4
Nonpareil	5 - 6
Rose Incomparable ..	4
Queen of Roses.....	3 - 4

Rose Crimson, Ruby, &c.

Adeliza	4 - 5
Adelaide	4
Constantia	4
Donna Maria	3 - 4
Defiance, Inwood's ..	
Perfection, Widnall's	3 - 4
Surpass Triumph Royal	3 - 4

Red.

Height in Feet.

Barnardia	5 - 6
Beauty of Hertford ..	5 - 6
Lord Melbourne	4 - 5
Minerva	5 - 6
Rufus	5 - 6

Scarlet.

Aurora	4
Barrett's William IVth.	5 - 6
Beauty of Cheshunt ..	5 - 6
Columbine	4 - 5
Coccinea speciosissima	4 - 5
Countess of Liverpool	5 - 6
Duchess of Richmond	5 - 6
Harold	5
Lass of Richmond Hill	4 - 5
Queen Bess	4 - 5
Romulus	5 - 6
Rising Sun	4 - 5
Scarlet Ranunculus ..	3
Veitch's Coronation..	5 - 6

Crimson.

Artabanes	5
Beauty of Sussex	4
Coronation	3 - 4
Conquering Hero....	4
Cicero	3 - 4
Falgida perfecta	4
—— Superba	4 - 5
Foster's Incomparable	5
Lady Fitzharris	4
Prince George of Cum-	
berland	4 - 5
Pretiosa	4
Timandra	4

Purple.

Height in Feet.

Atro-purpurea Superba	4 - 5
Colvill's Perfecta	4
Kentish Hero	3
Plutus	5
Poppæa.....	2 - 3
Royal Purple	4 - 5
Zelinda	2

*Blackish-purple, Maroon,**Puce, Blood-red.*

Achates	4
Achilles	5
Atra compacta	4
Alexandrina	3
Black Prince	3 - 4
Black Dwarf	2 - 3
Dawson's Victory....	5
Hall's Mogul.....	4 - 5
Imperiosa	6
Lord Liverpool	5
Nigra purpurea	4
Negro	3
Pulla	2
Stephenia	2 - 3
Susanna	4
Vesuvius	3

Yellow.

Golden Yellow	5
King of Yellows	5
Peerless Primrose ..	5
Pavonia	5
Pure Yellow	4 - 5
Reine de Jaunes	5
Sulphurea Elata	4 - 5
Squibb's Yellow	4
Well's Yellow	4 - 5

<i>Yellow striped with Purple, Red, &c.</i>		Height in Feet.	
Antonia	2 - 3	Incomparable, ditto ..	4
Flamed Yellow	2 - 3	Iris	3
Iris	3	Fairy Queen, Brewer's	3
Lutea purpurea	2 - 3	Metropolitan	4
Picta	3	Orlando furioso	4
Zebra	5	Radiata	4
		Tricolor	4
		<i>Globe-Flowered.</i>	
		Globe Crimson	3
		— Blood Red	3
		— Lilac	2 -
		— Orange, &c.	4
		<i>Anemone-Flowered.</i>	
		Alba purpurea	2 - 3
		Coronet	5
		Large Pink	4
		Mars	5
		Painted Lady	- 5
		Purpurea	4
		Spectabilis, &c.	5

<i>Orange.</i>	
Aurantia superba	4
Aurantia speciosissima, a very superior flower. (Bates's, of Oxford)	5
Prince of Orange....	5
<i>Striped, mottled, radiated, tipped in various ways.</i>	
Bella Donna	3
Conqueror	4
Commander in Chief, Levick's	4

POLLEN.

Mr. Lemon, a Nurseryman and Florist, near Paris, who has devoted much time and attention to the raising of new varieties of several kinds of flowers, of Peonies in particular, has discovered; that the Farina, or Pollen, gathered from single flowers, and kept in a small glass, or cup, will retain its virtue for some weeks, and take effect; by which means, he has been enabled to fertilize double and semi-double flowers of different species of the

tree and herbaceous kinds, that bloom two or three weeks apart, and which have never been known to produce seed before. With this provision of Pollen, applied with a Camel-hair pencil, he is, also, enabled to avail himself of every favourable opportunity of fair and serene weather, to effect it, with less risk of having the impregnation rendered abortive through rain. This discovery is well worth the attentive consideration of florists, who must be aware of the difficulty of obtaining perfect stamens from double flowers, which flowers they are often anxious to seed ; for, in many instances, single flowers will blow a week or two before the double ; and double flowers, without being artificially impregnated, have no chance of yielding seed.

GERMAN CHINA ASTERS.

I cannot omit here to make mention of the Chinese Asters, which have been introduced into the English gardens, from Germany, within these three years ; they are, certainly, of a superior description to those grown in this country ; the flowers are much larger, in general more double, and the colours, whether plain or striped, are rich, distinct, and varied ; they, certainly, deserve a place in every flower garden, and not the less so, for flowering in the Autumn, when shewy flowers are scarce. They should be sown the first week in April, to get the plants strong and forward, either in pots, or seed pans, keeping the sorts distinct, which may then be placed in a cold frame, till they come up ; when they have grown

strong enough, plant them in the ground. The shortest way, and that which will make the best display, is to mix the seed, and to sow a bed of them at once. A few of the finest and most distinct varieties, are, the Deep Red, Deep-Red striped, Pale Red, and Pale-Red tipped with white, Dark Blue, Dark-Blue striped, Pale Blue, Pale-Blue striped, Yellow-tinged, White, Silver-White, Flesh-coloured, Ash Grey, &c.

THE NEW SEEDLING HEARTSEASE, OR SUMMER VIOLETS.

Several florists have lately turned their attention to the culture of Heartsease, which has been attended with the most gratifying result; they have succeeded in raising, from seed, a numerous variety of plain and variegated flowers of great beauty, which are not more admired for their size, and richness of colour, than they are for the fanciful disposition of it on the petals. These seem, in the first instance, the promiscuous offspring of the *Viola amœna*, *lutea*, *tricolor*, and *blanda*, fertilized and crossed with one another.

This flower has always been a favorite with the Ladies; its endearing names of "Heartsease," "Love in Idleness," "Cull me, sweet;" "Three smirking Faces under one Hood," (the two upper petals coifing or covering the three lower,) "Pansy," corrupted from *Pensée*, Thought, alluding to keep in mind, or forget me not, have imparted a more than common interest to it; if it

had but the fragrance of the *Viola odorata*, which perfumes the air in March, it would indeed be desirable; but beauty and sweetness do not often go together. Some pretend to say, that *Viola* derives its name from its powerful scent "*ex Vi olendi*," which scent is confined to only two or three sorts; others ascribe to it a more poetical origin. These flowers ought to be planted in clumps, or beds, and then the rich mass of bloom, so mixt, and so many coloured, produces a very pleasing effect; it comes into flower the end of May, and continues through the Summer. The most prevailing colours, are plain purple, and violet, of many shades; red, brown, white, yellow, &c. as well as purple and violet, variegated with white, or yellow, "freaked with jet," &c. They like a cool moist situation in the garden, particularly in hot Summers, and ought, therefore, to be planted, not on raised beds, but on such as are kept upon a level with the alleys. They produce seed freely, which may be sown early in Spring, in cold frames, to bring it forward; and where the young plants can be sheltered from cold wind, and hail storms, till the weather gets warm and settled, when they may be planted in the open garden. They are propagated by dividing the roots, or by cuttings, placed under small hand-glasses, in June.

In the following abridged List, many of the varieties are distinguished only by the descriptive title of their colours; for some of our gardeners and florists, who pretend to Botanical knowledge, are unwilling to compromise their professed little to it, by adopting any of those fanciful, or personal names, which "lesser folks" pride themselves in giving, as much, perhaps, to flatter

their own self-conceit, as to compliment those high personages, whose names they make so free with. These flowers are at present in great request.

Allep's Queen Adelaide.

—— William IV.

—— Prince of Orange.

—— Black Prince.

—— Duchess of Kent.

—— Marginata.

—— Hero.

—— Lady Howden.

—— Apollo.

—— Duchess of Richmond.

Albion.

Achilles.

Bishop of London.

Blue Altaica.

Boyce's Lady Gifford.

—— Lord Lyndhurst.

—— Sir Walter Scott.

—— Sir James Mackintosh.

—— Earl Grey.

—— Rob Roy.

Brown's Mazeppa, superb yellow.

—— Maid of Athens.

—— Cupid.

Bunney's Queen Adelaide.

—— Earl Grey.

—— Reform.

Blotched Yellow.

Blotched purple and blue.

Blotched tricolor.

—— purple and white.

Burnett's variegated.

—— Pale blue.

Cream coloured.

Corinna.

Duchess of Gloucester.

—— of Northumberland.

—— of Wellington.

Dark yellow eyed purple.

Emperor.

Fairbairn's Invincible.

Fire King.

Favorite (Thompson's.)

Five Coloured.

Four Coloured.

Grand purple.

Hopwood's Puss.

King of the Whites.

Luna.

Lady Essex.

Louis Philippe.

Lord Gambier.

Light purple coloured.

—— Laced.

Large light blue.

Mottled Altaica.

Marshall's Reform.

Miss Grimstone.

Miller's George IV.

New tricolor.

Othello.

Priam.

Princess Victoria.

Purple White and Yellow.

—— Blue and Yellow.

—— and Bronze.

—— and Sky Blue.

Purple and Gold.	Thunder.
Prince Cobourg.	Thompsonia.
—— George.	Vulcan.
Queen of the Yellows.	Victory.
Red Rover.	White Eyed Purple.
Rubioides.	Wheeler's Marchioness of Bath.
Radiata.	—— Seedling, No. 1.
Sky Blue.	—— Monarch.
Superb Purple.	Willmer's Redbreast.
Sir John Reid.	—— Blue Beard.

N.B. The greater part of the above named varieties may be obtained of the Author, at Paddington.

NEW ANNUALS, &c.

Many of the new flowers, termed Annuals, (some of them will endure longer,) which have been introduced into this country, within these few years, are beautiful, and well worth cultivating; the following, among many others, are deserving of particular notice. Some of these may be sown in the natural ground, the first week in April, and will flower abundantly. Others, again, do best, if sown the beginning of March, in cold frames, or in pots, placed in them, till the seed comes up, where the plants may remain till they are fit to be pricked out into small pots; afterwards they may be turned into the ground, towards the end of April, or the middle of May, as the weather may suit. Others, again, more tender, require a little dung heat, to cause the seeds to vegetate more quickly; and when up, will require protection in the warm frame, till they get strength, and grow; it is

safest to keep these under glass, with plenty of air by day, either in frames, or in a greenhouse, till the beginning, even of June, before they are turned into the ground. Many persons, who have the convenience of protecting them through the Winter, will sow the seed in the Autumn, as they do Mignonette and Ten-week Stocks, by which means they have strong plants early in the Spring, which come into flower sooner, and ripen their seed the better.

Anagallis Indica, &c.
Ageratum Mexicanum.
Argemone grandiflora.
 ——— *Barclayana*, &c.
Adlumia cirrhosa.
Ammobium alatum.
Oenothera rosea, *alba*, &c.
Blumenbeckia insignis.
Centaurea Americana.
Calendrina grandiflora.
Coreopsis Askinsonia.
Clarkia pulchella, *alba*, &c.
Commelina cœlestis.
Clintonia elegans.
Didiscus cœruleus.
Eschscholtzia Californica.
Glancium Phœniceum, &c.

Gilia alba.
Hibiscus Africanus.
Kaulfussia amelloides.
Lathyrus Californicus.
Madia elegans.
Malva miniata, &c.
Malope Grandiflora.
Pyropsis elegans.
Podolepsis gracilis.
Romeria hybrida.
Stevia serrata.
Salpiglossis, picta, &c.
Schizanthus pinnatus.
 ——— *Hookeri*, &c.
Silene pendula, &c.
Trachimene cœrulea.
Verbena Lamberti, &c.

CONCLUSION.

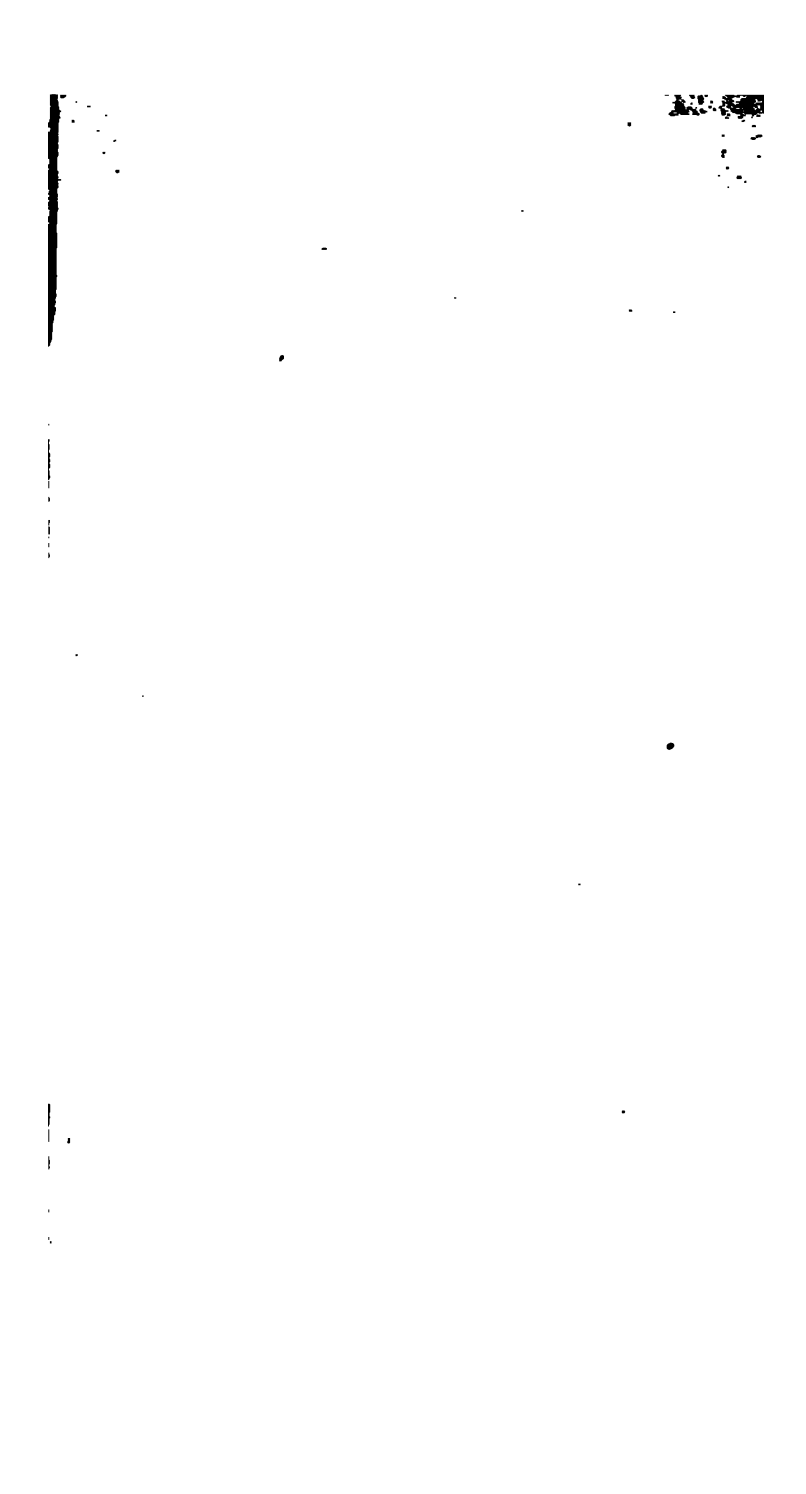
As this is the last time that I can ever hope to address my readers, I beg to return my most grateful thanks to those Ladies and Gentlemen, from whom I have experienced the most liberal support and patronage; to the Amateur-florist, who cultivates flowers purely for amusement, I also beg to tender my most grateful acknowledgments; as well as to all those Nurserymen and Florists, who, like myself, cultivate them for sale, for the favours which I have received at their hands. At the same time, I solicit a continuance of their custom; and I do this with the more confidence, because I am not aware, that I have, in any one instance, forfeited the good opinion which they have been pleased to entertain so long of my plain and upright dealing. If any mistakes have occurred, through inadvertency, I have never hesitated a moment to set them right; and, without pretending to more honesty than others in the same line of business, I can only say, that I have endeavoured, throughout, to act fairly and conscientiously towards all.

Though my infirmities increase, and though I am able to do little or nothing myself, yet the same routine of culture and management will be continued, as usual, by my two sons, who have been, for some years past, the acting managers and florists in the business; so that my friends and customers may safely depend on being supplied with healthy plants, correct in every respect, as before.

It is some consolation in being able to state, that, in all the dealings which I have had with florists, both in England, and in different parts of the continent, there is not one of them can say, that I have not honestly fulfilled every engagement.

On the other hand, though the subject is not a pleasant one, there are sixty persons, both noble and ignoble, whose names stand entered in my Account-books, who have failed in their engagements towards myself; out of which number, I could select nearly twenty, whose conduct has been marked with the most fraudulent and dishonest intent to deceive, from the first; for they contracted debts without the least idea of making payment. The most fitting punishment for such persons would be, the public exposure of their names and residence, were there not a possibility that the foul stigma might undeservedly attach, in a few years more, to some of their innocent and unoffending offspring, bearing the same names. While I thus condemn fraud and dishonesty, I can always, from my heart, pity and respect misfortune.

THE END.



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